

SEPT 4 1917  
THE  
**MEDICAL JOURNAL**  
**OF AUSTRALIA**

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. II.—4TH YEAR—No. 9.

SYDNEY: SATURDAY, SEPTEMBER 1, 1917.

PRICE 6d.

**Allen & Hanburys Ltd.**

MAKERS OF  
**SURGICAL INSTRUMENTS**

SUPPLIERS TO  
**H.M. ARMY and H.M. NAVY**

ALL INSTRUMENTS ARE OF THE  
**BEST BRITISH WORKMANSHIP**

AUSTRALASIAN BRANCH:  
**B.M.A. BUILDING, ELIZABETH STREET, SYDNEY**



## The Fine Arts at Anthony Horderns'

The FINE ART GALLERY at ANTHONY HORDERNS' NEW PALACE EMPORIUM has become the Mecca of Connoisseurs and all who have an Innate Love of the Beautiful. In this New Section of our Enterprise an earnest Endeavour has been made to display Unique Collections in Varied Branches of Art, representing Selections from the Choicest Modern Productions as well as the Antiques, constituting a Permanent Exhibition of—

Genuine Bronzes, Marble Statuary, Wood and Ivory Carvings, Period Furniture, Oriental Carpets, Eastern Curios, Hand-cut Glass Etchings, Engravings, Hand-wrought Metals, Exquisite Enamels, Oil Paintings, Water-colour Drawings, many pieces of irreproachable Pottery, and Porcelain, Royal Doulton, Royal Worcester, Royal Crown Derby, Coalport, Copeland, Minton, Wedgwood, Belleck, Royal Copenhagen, Lancastrian, Bernard Moore, Gouda, Old Celadon, Chinese and Japanese Ware.

INSPECTION IS INVITED AND NO ONE IS IMPORTUNED TO PURCHASE

*Anthony Hordern & Sons Ltd*  
NEW PALACE EMPORIUM  
BRICKFIELD HILL SYDNEY.

## LINDEMAN'S CAWARRA Sparkling Wines

### WHITE STILL WINES.

Cawarra Hook  
Cawarra Chablis  
Cawarra Reising  
Cawarra Sauterne  
Cawarra Sherry  
Cawarra Madras

### RED STILL WINES.

Cawarra Claret  
Cawarra Dry Burgundy  
Cawarra Carbinet  
Cawarra Hermitage  
Cawarra Port  
Cawarra Muscat  
Cawarra Frontignac  
Cawarra Sweet Burgundy

- |      |                  |       |                            |
|------|------------------|-------|----------------------------|
| 1912 | BOTTLED CLARET   | ..... | Lindeman Ltd., Gold Medal. |
|      | BOTTLED HOOK     | ..... | Lindeman Ltd., Gold Medal. |
|      | AND CHABLIS      | ..... | Lindeman Ltd., Gold Medal. |
| 1913 | BOTTLED CLARET   | ..... | Lindeman Ltd., Gold Medal. |
|      | BOTTLED PORT     | ..... | Lindeman Ltd., Gold Medal. |
| 1914 | BOTTLED CLARET   | ..... | Lindeman Ltd., Gold Medal. |
|      | BOTTLED HOOK AND | ..... | Lindeman Ltd., Gold Medal. |
|      | CHABLIS          | ..... | Lindeman Ltd., Gold Medal. |
|      | BOTTLED PORT     | ..... | Lindeman Ltd., Gold Medal. |

It will thus be seen that Lindeman Ltd. gained SEVEN GOLD MEDALS OUT OF A POSSIBLE NINE for these High-class Commercial Wines during the last three years.

**Lindeman Ltd.,** Q.V. MARKETS,  
George Street, SYDNEY

Telephone: City 981 and 6789

## "FRESH FOOD" MILK

is supplied to most of the leading Public and Private Hospitals and Institutions.

Absolutely pure and properly Pasteurised, as recommended by the Medical Profession.

Doctors and Nurses can with every confidence recommend this milk to their Patients.

WE SPECIALISE IN  
Humanised Milk, Sterilised  
Milk :: Pasteurised Milk

" THE "

**N.S.W. Fresh Food & Ice Co. Ltd.**  
25 HARBOUR STREET, SYDNEY



# THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. II.—4TH YEAR.

SYDNEY: SATURDAY, SEPTEMBER 1, 1917.

No. 9.

## FRACTURES.<sup>1</sup>

By R. Hamilton Russell, F.R.C.S. (Eng.),  
Senior Surgeon, Alfred Hospital, Melbourne.

When I received an invitation from the President and Council of this Branch to come here this evening to open a discussion on the treatment of fractures, an honour that I prize highly and gratefully acknowledge, I accepted the invitation not without misgiving. For one thing, I have already stated my thoughts on the subject at considerable length more than once, and on the last occasion, quite recently; and yet I knew that I should not have been asked to open the discussion on fractures unless it had been felt that there was something in the subject that would repay discussion. Needless to say, I had no thought in coming here of imparting knowledge in the ordinary lecture-room sense; for it is not knowledge of that kind that is lacking. What we all want is a firm and confident foothold upon certain root-principles as a foundation upon which we may raise an edifice of surgical procedure. So I trust you will not be disappointed at finding that I shall barely allude to many of the matters that you will possibly expect to hear much about. I find, for instance, that I have omitted all mention of recognized methods of treating fracture; the principles of Lucas-Championnière, for instance, and the mechanical appliances of Robert Jones, Hey Groves, and numerous other inventors of different kinds of splints. I shall even spare you the recital of my own statistics, for the excellent reason that I have none. Frankly, I have never found myself able to conduct a long series of cases of any kind, even of the simplest, without occasional lapses and failures that would be quite ruinous to the statistics.

There is a well-known aphorism to the effect that "more mistakes are made through not looking than through not knowing," and this I would modify somewhat so as to strike even deeper at the root of the matter, and say "more mistakes are made through not knowing how to look than through not looking." I shall try this evening to contribute something towards the study of "How to look at fractures," and if by good fortune anything I may say should be helpful towards that end, I shall be content in the knowledge that I shall not have come to you quite so empty-handed as I at first feared that I should.

I propose to suggest certain features of the subject about which there is either a striking lack of unanimity among surgeons, or even—and this I do with some diffidence—subjects of venerable tradition about which there would seem to be a unanimity too complete, and which seem to need revision. I should like first to discuss in general terms our attitude towards the rôle of open operations in recent

fractures. This is, of course, Sir Arbuthnot Lane's subject, and while I am quite in agreement with him as to the frequent necessity for operation, I find myself differing from him as to the circumstances under which operation should be undertaken, and the nature of the operation to be performed. Lane bases his contention upon the broad fact that the results of fractures of the long bones, especially of the lower extremity, treated in general hospitals, have been shown by investigation to be unsatisfactory; also that the main cause of the bad results is to be found primarily in malposition of the fragments, with delayed union, non-union and permanent impairment of the limb as secondary results. He therefore takes the view, quite logically, that in order to improve these results, the paramount aim of the surgeon should be to prevent malposition, which can be more efficiently and directly done by operative fixation of the fragments in good position than by any other means; and he aims directly at exact anatomical reposition as his ideal. This argument is so sound, as far as it goes, that I should find great difficulty and experience considerable hesitation in attempting to oppose it, were it not for one obvious objection that cannot be got over. The operative treatment of fractures can only be safely undertaken by the few; whereas the treatment of fractures is within the province of the many. It is impossible to dispense with non-operative methods in the treatment of fractures; I would even go further and say in the majority of fractures. This being so, it is obvious that we must review our non-operative methods in the endeavour to improve them; further, we must see that our students are well-instructed in the principles and technique before they go out into practice. If, on the other hand, hospital surgeons and teachers follow the lead of Lane, it must inevitably follow that they themselves will know less about, and care less about, and neglect to teach the principles and methods of the non-operative treatment of fractures, with the result that the general practitioner will suffer in this important branch of his hospital training, and the results of fractures in the aggregate will be worse instead of better. I propose this evening to give some account of the way the problems present themselves to me personally, and the way I endeavour to teach my students. I have often remarked that the difficulties that beset the treatment of fractures seem to me very often to be difficulties of our own creating. As we go on, you will, I think, grasp the significance of this observation rather vividly.

Let us take first, a case of ordinary fracture of both bones of the leg. This is a class of injury that has given notoriously bad results; it is commonly supposed to be so difficult to keep the fragments in good position that many surgeons regard it as imperative to fix them in correct position by operation. If we examine a number of such fractures

<sup>1</sup> Read at a Meeting of the New South Wales Branch of the British Medical Association on July 27, 1917.

after recovery has taken place, we shall find in almost all that the malposition is dual, and consists in (1) over-riding, and (2) internal rotation of the lower fragment and foot. How comes this about?

There is a very general belief that the main element of difficulty and in the production of malposition is to be found in the muscles which pull the fragments into faulty position; and that the surgeon is the innocent victim of this special vice of the muscles. If this be so, what is the reason that can explain why the muscles, after fracture has occurred, should suddenly become possessed by an insane desire to assume a position and a pose that is foreign and abnormal to them. There is no such reason; and if there is one thing above all others that muscles never do, it is to behave in this way. We have abundant clinical evidence of the resistance that muscles oppose on every occasion to the adoption of a novel position, and the pertinacity with which they will endeavour to return to the position to which they have been accustomed, even when that position is a faulty one to which, from the accident of circumstances, they may have become habituated. No better general illustration of this could be given than the behaviour of the muscles in a case of torticollis.

When we operate for torticollis, and have divided or removed the sterno-mastoid and other tense structures with sufficient freedom to permit the head to be straightened, we find that the treatment will have only been begun. After the operation the head will tend to resume its faulty position, just as though nothing had been done. We know well the reason of this. The muscles have become accustomed to the faulty position; some have been shortened, some lengthened, and all will have become habituated to the state that is associated with the wry-necked position. Hence, when the position of the head is forcibly rectified, the muscles one and all feel uncomfortable; they feel that the new position is wrong, or to be more physiologically exact, they cause the patient to feel that the new position is wrong, and they all with one accord strive to revert to the position they have come to regard as the correct position. They are uncomfortable in the correct position, and are comfortable only in the faulty position, so that we have to set to work to re-educate their muscular sense and teach them to recognize when the head is straight, until they are able to acquiesce in that position naturally and comfortably. An example even more apposite is afforded by a case of fracture united in malposition, in which operation is undertaken for the purpose of remedying the deformity. No matter what our method of operation may have been, we find that the muscles will manifest a most pertinacious tendency to reproduce the deformity, so that we have to contend with this acquired vice day by day for a long time; they have become accustomed to the malposition and they resent being compelled to reform and overcome their



FIG. 1.

bad habit. The surgeon has to enter upon a prolonged contest with them, and in order to do this successfully, he must understand the physiology of his problem. These considerations enable us to formulate a principle or law governing the action of muscles, which we may state thus: "All muscles resist and resist the adoption of a position to which they are unaccustomed, and if they happen to be muscles controlling the fragments of a broken bone, they will do their best to restore the fragments to the position they occupied prior to the injury, that being the only way in which the muscles themselves can resume their normal state and pose." And now you recognize the point to which this little dissertation has brought us. When a bone has been broken, the muscles of the limb may be trusted to do their best to restore the fragments to the position they previously occupied, and keep them there. They are quite as anxious to do this as the surgeon is, and they are his best friends, if he will but recognize it, and give them a fair opportunity to prove their fidelity. I believe that we may accept as fundamentally true, or at least with very slight reservation, the statement that muscular action is never the cause of malposition in fractures; and the slight reservation, I may say at once, is concerned solely with the shortening seen in fracture of the femur, which is a subject that possesses special physiological problems of its own. Let us now return to the fracture of both bones of the leg; armed with the foregoing information, we know that the muscles are friendly, and will do their best to maintain the fragments in their normal position; and yet we find that two kinds of malposition beset the treatment of such fractures, over-riding and internal rotation of the lower fragment. We will examine these two kinds of displacement separately. First, as to the over-riding. If we study the arrangement of the muscles in the leg, we shall at once see that the only muscles that can by any means be converted into an agency for the production of over-riding are the calf-muscles; and that these can only cause over-riding if the foot is brought up to a right angle. If the foot is left free and allowed to point, the utmost that the calf-muscles are capable of effecting will be a slight movement at the ankle-joint. Hence we may feel secure against over-riding if we abstain from forcing the foot up to a right angle, and allow it to point in the natural way. Is it, however, natural for the foot to be pointed? Clearly it is, for that is the position of rest which the limb naturally assumes during sleep, and we may say at once that our first rule in the putting up of a fracture is that it must be placed in such a position of rest; more than this, it must be free to maintain this position, even despite any movements of the patient's body, and any retentive apparatus or splint that interferes with this freedom will be harmful. Not only, then, need we have no apprehension as to the wisdom of putting up the limb with the foot extended; our first rule enjoins that we should do so, and in following it we shall dispose once and for all of all danger of over-riding, for over-riding will be rendered impossible. And now as to the internal rotation, how is this caused? In the over-riding the



muscles can be made the active agents by mismanagement, but even mismanagement cannot involve the muscles in guilt on this occasion, for there is no muscle possessed by the leg that can be made to cause internal rotation. If we again observe the normal limb at rest, we note that the foot, in addition to being extended, points upwards and out-



Fig. II.

wards at an angle of about  $30^\circ$ . The whole limb is rolled outwards in this way, so that the patella looks somewhat outwards. If now we lay by the side of the leg an ordinary splint with a foot-piece, we see that the foot-piece will look directly upwards, and may even have, in addition, a cant inwards to-

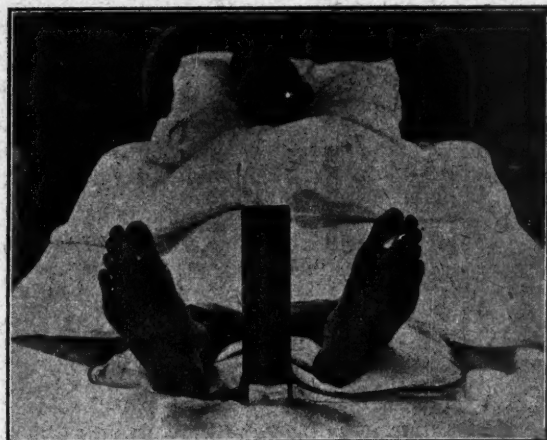


Fig. III.

wards the hollow of the bed. It is clear that such a splint applied to a broken leg will exert complete control only over the position of the lower fragment and foot, while the upper fragment and knee will roll outwards into its chosen position inside the bandages. By applying such a splint to a broken limb we shall be adopting the simplest and most

direct means of twisting the lower fragment and foot inwards. We should, I believe, find it hard to devise any other arrangement that will produce internal rotation of the foot with such efficiency and certainty as this. Hence we see that the ordinary back-splint with foot-piece supporting the foot must cause both over-riding of the fragments and internal rotation of the lower fragment and foot, and I believe we shall be very near the mark in saying that this characteristic malposition can be produced in no other way than by the use of such a splint. When I was in France with the Australian Voluntary Hospital, I witnessed an impressive example of the way in which such a splint can create the displacements I have just described. An officer had been shot through the leg, both bones having been fractured, but the fact of the fracture had been overlooked because the bones in such an injury are not torn away from their fibro-muscular attachments, but are held in position by them. Hence, although several days had elapsed and he had come a three or four days' train journey, no displacement was present. On his arrival at our hospital, his limb was neatly put up on a back-splint with foot-piece by a very well trained surgeon, and the next day the characteristic rotation of the lower fragment was found to be in full evidence. I think you will agree that these considerations will go some way towards justifying my remark that the difficulties we experience are sometimes difficulties of our own contriving. And now we arrive at the question, "What apparatus shall we use?" Until the last few months, I have been accustomed to treat all fractures of the leg by the application of lateral moulded splints of poroplastic, cut roughly to the

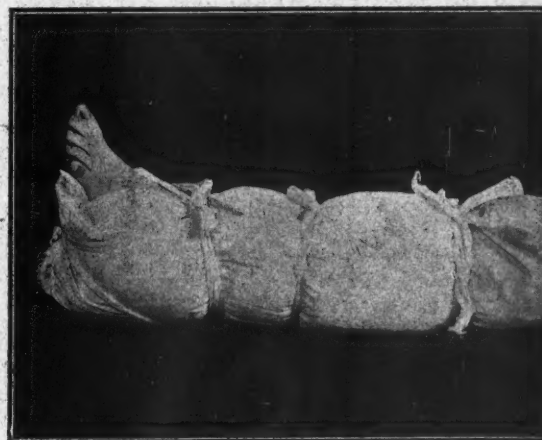


Fig. IV.

shape of the leg and foot, but latterly even these have fallen into disuse. For one thing, we are no longer able to obtain poroplastic, and our supply became exhausted some time ago; and then a more or less accidental experience revealed to me the merits of an ordinary pillow as a splint for a broken leg. For several months past we have used nothing

else, beyond the additional support sometimes of two flat pieces of wood. Our method of using it is as follows:—

A moderately lax pillow is used, and the limb laid upon it in good position, so that the entire lower limb, from the knee to the heel, is resting upon it. The pillow is then simply folded round the limb, and firmly secured by strips of broad bandage. The lower end of the pillow is brought together or bunched up below the sole of the foot, so that the ankle and foot are steadied and supported. The need for additional support of wooden splints will be determined by the firmness or laxity of the pillow. The whole is then slung inside a cradle, or sometimes the patient prefers that it should merely lie somewhat raised upon another pillow. All kinds of fractures of the leg and ankle region can be treated satisfactorily in this simple fashion; and we have found that Pott's fracture, an injury notoriously difficult to treat and fruitful in bad results, has become perhaps the easiest of all fractures of the leg to handle. In Pott's fracture, there will be no tendency to outward dislocation as long as the foot is allowed to point naturally; the foot may tend to fall backwards, but that difficulty is better met by the support of the pillow, which is wrapped round the heel and then slung, than by any other appliance (*e.g.*, the horse-shoe splint) that I know of.

I have laid much stress on the importance of allowing the foot to be pointed under penalty of causing over-riding, but this only applies to the initial period when the position of the fragments is



Fig. V.

being determined. After two or three weeks, when the ends of the fragments will be bound together with sufficient firmness to resist displacement, the bringing up of the foot towards the right angle will be helpful in stimulating the process of union. We then place a box at the end of the bed against which the patient is allowed to make a little pressure with the fore part of his foot, so as to dorsiflex the ankle; this plan combines the advantages of exercising the muscles, freeing the ankle-joint and press-

ing the bones gently together. This is perhaps the nearest approach to "passive motion" that ever enters into our methods; but you will note that it is performed by the patient himself, under the guidance of his own sensations, which are usually to be trusted to prevent any harm being done. I must make it very clear, however, in describing this simple plan of putting up broken legs, exactly how much and how little we may expect it to accomplish. A limb must not be put up either in a pillow or in any other appliance and then left. The limb should be taken down, inspected, handled, lightly rubbed and massaged and put up again daily for the first few days and then perhaps not quite so often. I believe that the real excellence of the mobilization and massage method of Lucas-Championnière lies more in the frequent taking down and putting up of the limb than in any formal manipulations that are employed. It is quite easy for malposition to occur in the pillow splint, if it is left alone in the mistaken belief that it may be trusted to look after itself. The difference, however, between the pillow and the back splint with foot-piece is this, that in the one case malposition and a bad result will occur only as the penalty of insufficient care and negligence; in the other case, it must occur whatever we do.

I have analysed the case of ordinary fracture of both bones of the leg at this length, with the object of showing that we must deduce the surprising and rather humiliating conclusion that the cause of the malposition cannot be ascribed to muscular action, but solely to the surgical methods adopted, and in spite of muscular action. This is by no means an isolated example. A similar analysis of the angular splint still often applied to the arm would expose it equally as a device of the enemy; in fact, there is hardly any of the time-honoured formal splints that could emerge from the test with even moderate credit.

And now I am afraid that after this somewhat lengthy disquisition, we have almost forgotten that we are still discussing the rôle of operation in recent fractures. What I have been arguing in the case of the leg is that we have been mistaken in supposing that muscular action causes difficulty in keeping fragments in position; and mistaken in supposing that there is any inherent difficulty in keeping the fragments in position, if we recognize a few simple mechanical and physiological principles and act upon them. And this holds good of all fractures of the long bones, with the exception perhaps of the femur; but that is a rather different story. Hence my first contention with regard to the rôle of operation is that we must not accept the principle of operation as a legitimate means of enabling us to keep fragments in position. Yet I hasten to explain that operation has a most important sphere of usefulness in the treatment of recent fractures, but its true rôle is not to keep the fragments in position, but to get them into position, when they cannot be got into position by any other means. This happens frequently. An exact illustration of this standpoint is afforded by the case of a boy of 15, who was admitted to the Alfred Hospital with a trans-



verse fracture immediately above the condyles of the femur. The violence that had produced the fracture had caused the upper fragment to be driven deeply into the popliteal space, from which it projected on the outer side. All efforts to restore the fragments to their correct position under anaesthesia were unavailing; not the slightest progress could be made that way. Operation was, of course, performed, the seat of fracture was exposed from the outer side, the long upper fragment which had become incarcerated in the tendinous and aponeurotic structures behind the knee-joint, was freed and prized back into position. Once in position, all difficulty disappeared. The limb was treated without any splint in the extension apparatus we always employ now, which was figured in *The Medical Journal of Australia* of August 12, 1916. The result you see from the skiagram. You will note



Fig. VI.

that the anatomical result is perfect, as was also the functional result. You will also be struck by the absence of the customary plate and screws, and you will feel with me that their presence would not have enhanced the beauty of the result, nor the credit of the methods employed, but that, on the contrary, they would have been a defect and a reproach.

Thus, in my opinion, the function of operation should be the getting of fragments into position; not the keeping of them there in recent fractures. In secondary operation for the correction of longstanding malposition, the problem is entirely different, and I wish to draw a broad distinction between the two cases, as I do not intend to allude to the question of secondary operation again. I wish to emphasize the point that the real crux of the whole matter, and the one difficulty that is truly formidable in the treatment of fracture, is the initial difficulty in getting the fragments into their proper place. We hear a great deal too much about

the keeping of fragments in position, and a great deal too little about the getting of them there. It will often happen that the violence that breaks a bone will cause the end of one or both of the fragments to be torn away from its fibrous attachments, stripped out of its periosteal covering perhaps, and thrust through contiguous muscle or aponeurosis, which grasps it tightly, so that it cannot be disengaged and brought back to the place where it lay. When this has occurred, success in bringing the bones into position is improbable, and operation should be undertaken at once. This difficulty is most likely to be met with in the case of the single bones, the humerus and the femur; but whereas in the humerus, the difficulties experienced both in the diagnosis and in the operative management may be set down as comparatively insignificant, in the femur the difficulties in the way of recognition and of operative treatment are very formidable, and the results of failure to cope successfully with them especially disastrous. The usual fate of such cases in the past has been for the condition to remain unrecognized until non-union was confirmed after many weeks of futile treatment, and by that time, in addition to non-union, there will be always excessive shortening. From this it is clear that our methods of diagnosis must have been seriously wanting. Skiagraphy is of little, if any, help at all. Unless some plan of recognizing this condition can be found, we cannot meet the arguments of those who advise operation in such fractures almost as a matter of routine. To the best of my belief, there is one way, and one way only, by which we may promptly recognize the fact of interposition of muscle between the fragments of a broken femur, and that is by noting whether the length of the limb can be perfectly restored by extension; and clearly, before such a test can be regarded as trustworthy, it will be a necessary condition that we must know that our method of extension is to be relied upon implicitly. With our older methods, such as the haphazard putting of a weight on to a limb in a long Liston splint, no information as to the presence of interposed muscle can be gained, because the limb will never be pulled out to its correct length in any case by such means. The method of extension which we have been using now, for several years has proved, however, not merely a very satisfactory method of treatment, but also a most valuable means to a prompt diagnosis of muscle interposition. If, after applying the extension apparatus to a fractured femur, we find that the limb can be drawn out without difficulty to its correct length almost immediately, we may, I believe, safely conclude that the fragments are at any rate in contact with one another, even if they are not as accurately apposed as they would be if fastened together with plate and screws; and above all, we may conclude that there is nothing between them to prevent their union. If, on the other hand, we find after applying a weight which we know by experience ought to be sufficient, that the thigh remains persistently an inch or more short; and if we then add a little pull of our own to the weight just sufficient to get the length right or nearly right, and the moment we relax our pull, we find that the limb slips back again with a curious elastic feel, we

may anticipate trouble. In conjunction with this extension test, we shall also find that the feel of the thigh will be wrong; the alignment of the bones will be defective, and there will be a projection of the end of one or other fragment at or near the seat of fracture. With these two important diagnostic features mutually confirmatory of one another, *viz.*, the persistent shortening, *plus* persistent bad alignment, we shall, I believe, with certainty, find means of escape from the disaster of putting up a fracture so disposed that it cannot possibly unite.

Of course, the treatment will be obvious, but I may remark that I have found it sometimes easier to make the diagnosis than to satisfy myself at the operation that the bones were completely and satisfactorily freed. The chain of reasoning that enables us to make the diagnosis is very simple. In order that the thigh may be drawn out to its correct length, it is obvious that every muscle in it must in like manner be drawn out to its correct length. A single muscle that, from its incarceration is prevented from assuming its normal straight position, will accordingly be subjected to severe strain, and will forcibly resist, and it is this which causes the persistent shortening, and the peculiar feeling of elastic recoil experienced as the limb falls back to its shortened state after being forcibly pulled out. Fracture of the femur appears to me to occupy a position of splendid isolation among fractures; in its treatment, efficient extension is everything, all other considerations trifling and formal. In no other fracture is extension ever necessary or desirable, in my opinion, although I am aware that many will take exception to this view. The theory of extension in fracture of the femur was reasoned out at considerable length in my paper published in *The Medical Journal of Australia* last August, so that I do not wish to expend time on it now. I may, however, be permitted to show the appliance we always use and the principle upon which it is based.



FIG. VII.

The need for aiming at exact anatomical reposition is a matter of which we hear much, and rightly; but I am not satisfied that in this respect fracture of the femur is quite on all fours with other fractures, and as an object-lesson that will serve as the text of a few remarks in this subject, I will ask your

attention to these two fractured bones. They depict the final result of union in a case of fracture of both thighs in a soldier, the account of which was published in my previous paper. If the skiagram had shown the fragments accurately apposed end-to-end and fastened with a plate and screws, you would have thought it perhaps a much prettier picture and a better result. Let us look at it from a different standpoint, for the object of treatment is not the providing of an attractive skiagram. Note that the overlapping is exactly equal in both bones, so that both thighs will be of the same length; again note that the overlapping is only 1.25 cm. ( $\frac{1}{2}$  inch), and recovery with 1.25 cm. of shortening only has always been regarded as a very good result. As a matter of fact, in this case we had to guess at the correct length, and our guess was wrong by 1.25 cm. Again, mentally fill in the angles with callus, and you will realize that the bone united in this way is infinitely stronger than if the fragments had been end-to-end. There is, or used to be, a tradition well known to the lay public that a bone that had been broken was rendered all the stronger ever after; this is the explanation of that belief, which is well-founded. But the ultimate test is, and must always be, the clinical or functional test as distinguished from what I may call the skiagraphic test. Both thighs were solidly united, and the extension apparatus was taken off in six weeks; in 10 weeks he left the hospital walking well, and in 14 weeks he was back at military duty. Shortly after he went to France, where he has been fighting ever since, and the other day I saw his name, if I mistake not, in a casualty list, as having been severely wounded in the arm. It is clear then that in the case of the thigh, at any rate, exact anatomical reposition is not essential to a perfect functional result. Moreover, we have to remember that in every case of fractured femur in which there is any shortening at all, the bones must overlap and lie side by side in this way. In the case of this soldier, the result could not have been bettered, nor even, in my opinion, equalled, had the two bones been subjected to operative fixation. In contrast to the case we have just seen, and as showing that I am not disposed to undervalue exact anatomical reposition, this picture of a fracture of the fibula is of interest. The patient was an officer, and although the malposition appears to be trifling, I was so dissatisfied with the boss of bone which projected beneath the skin, and which seemed likely to be a cause of inconvenience that I cut down and rectified the misplacement on finding that I was unable to correct it in any other way.

Fractures involving joints are in a category by themselves. Commonly, the involvement of the joint takes the form of one or more fissures passing through the articular surfaces, with but little or no displacement, but the joint will become filled with blood. Where there is no gross bony displacement, no permanent impairment of the joint's mobility need be feared, provided that the injured parts are allowed to heal undisturbed. The belief that in order to anticipate and guard against permanent stiffness, passive movement of the joint must be









employed, dies hard, but I rejoice to note evidence that it is dying. A friendly hand has drawn for me these two diagrams to illustrate the difference between active and passive movement of a joint. Active movement is movement performed by the patient's muscles in the normal manner. When we voluntarily flex the elbow, the process does not consist merely in a contraction of the flexor muscles of the elbow; the extensor muscles are equally involved in the act of flexion, and their share in it consists in a lengthening which is synchronous with and exactly balances the contraction of the flexors. This process is indicated with sufficient clearness by the arrows, whose direction indicates the contraction of the biceps upwards and the elongation of the triceps downwards. This process will permit movement to take place at the joint in the normal manner, without any increase of pressure or other dis-

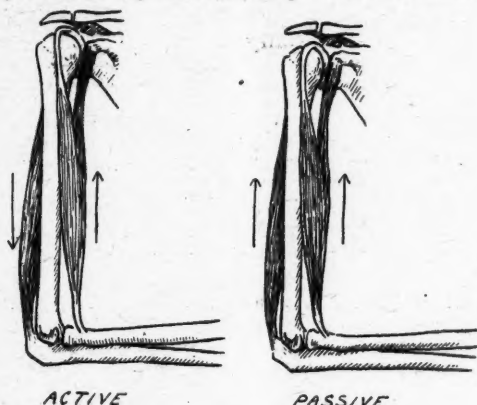


Fig. VIII.

turbance of the joint surfaces. But if, on the other hand, we perform what we are pleased to call "passive" movement, which means that somebody else's muscles do it instead of the patient's, the result is very different. On bending up the elbow, there will be no compensating elongation of the triceps; on the contrary, it will be impelled to contract in resistance, a contraction that will be greatly aggravated by the pain inflicted. In this case, therefore, it is clear that we shall have the entire force that is expended in the act of flexion converted into an increased pressure on the joint surfaces, with the result that if they are suffering or only just convalescing from injury, they will be crushed and stirred up, and the maximum amount of damage inflicted upon them. Hence I look forward to the time, now surely very near at hand, when "passive movement" will be expunged finally from our category of surgical measures. Active movement, on the other hand, cautiously and sensibly utilized, can never do anything but good. The two joints that suffer most as the result of the employment of passive motion are probably the elbow and the wrist, and I should wish to emphasize the need for rigid abstention from passive movement and massage in the injuries of the wrist-joint. The elbow has certainly a wonderful way of recovering, even after the most sedulous and persistent employment of passive movement. It

has happened repeatedly that, when passive movement has been employed on a stiff elbow until surgeon, patient and patient's friends are sickened and discouraged, recovery will commence in an almost uncanny way and the mobility of the joint return rapidly, as soon as the surgeon gives it up in despair. I have never seen anything of this fortunate nature happen in the case of the wrist-joint; and it is, I believe, almost certain that if, for instance, a fracture of the carpal scaphoid is subjected to early passive movement and massage the damage that will accrue will be irremediable. On several occasions it has fallen to my lot to do a partial excision of the wrist in such cases.

## Reports of Cases.

### A CASE OF FRACTURE OF THE SKULL<sup>1</sup>

By Archie Aspinall, M.B., Ch.M. (Syd.),  
Honorary Assistant Surgeon, Sydney Hospital.

R.P., an ironworker, aged 17 years, was admitted to the Sydney Hospital on March 14, 1917, with the history of having been struck on the left side of the head by the handle of a steam hammer. The accident occurred at 10.50 p.m., and the patient arrived at the Hospital at 11.10 p.m.

I am indebted to Mr. Shand for the following notes:—

On admission the patient's temperature was 37.8° C., his pulse-rate was 76 and his respirations were 26 in the minute. He was unconscious. There was a deep cut about 7.5 cm. long over the left side of the skull, extending antero-posteriorly and placed in front of, and above, the left ear. There was a hæmatoma surrounding this region. The bone was found to be comminuted, one piece was removed.

The knee-jerks and ankle-jerks were exaggerated. Babinski's reflex was obtained on both sides. There was ankle clonus on the left side.

The left pupil was dilated and the right pupil contracted. There was no bleeding from any of the cranial orifices. No other injury was detected.

Later the patient was still unconscious. He had had a fit at 9 a.m. The pupils were contracted and equal. He was passing urine and faeces involuntarily.

March 16, 1917.—The patient was unconscious and very restless.

At 1.30 p.m. lumbar puncture was performed by Drs. Farrar and Harrison, under chloroform anaesthesia, and 32 c.cm. of blood-stained cerebro-spinal fluid under increased pressure were withdrawn. The parents' consent having been obtained, I operated at once.

The wound in the scalp was enlarged and a transverse incision made, exposing the skull. Portions of the temporal and frontal bones were found to be depressed, and portion of the temporal muscle wedged in between the bones. A fissure fracture, about 0.15 cm. in width, extended from the anterior end of the depressed bone to the median line, and another from the posterior end toward the parietal eminence.

The depressed portions of bone were elevated, after some of the rough edges had been cut away and the oozing from the anterior and posterior branches of the middle meningeal artery had been stopped by cutting through the bone and crushing it. The *dura mater* was not opened. The wound was well washed out with a 1 in 500 solution of hydrargyri perchlorid, a rubber drain inserted into the anterior portion and a gauze drain placed in the posterior portion. The wound was loosely closed with fishing-gut sutures.

March 18, 1917.—The temperature was normal, the pulse-rate was 64, and the respiratory rate 20. The patient was still unconscious. He was, however, able to take food.

March 26, 1917.—The patient was still unconscious. He had not spoken since admission. He opened his eyes and moved his arms occasionally. His hands were cold.

<sup>1</sup> Read at a Meeting of the New South Wales Branch of the British Medical Association on July 13, 1917.

March 28, 1917.—He appeared to be regaining consciousness. There were no signs of speech.

April 1, 1917.—The patient understood what was said to him. He protruded his tongue when requested.

April 3, 1917.—The patient was able to speak. His vocabulary was limited to "yes" and "no." When pressed for fuller answers, he appeared very troubled, and ended by saying "yes" or "no," irrespective of what answers were expected.

April 4, 1917.—The patient was improving. He was able to say his name and age, though he still had a preference for the words "yes" and "no." He was not so restless when questioned.

April 5, 1917.—He answered questions intelligently, but limited his replies to one word, if possible.

April 6, 1917.—When asked what certain objects were, his answers at first were somewhat blurred and indistinct, but when pressed he answered more clearly.

April 7, 1917.—The patient was improving. Hesitancy of speech was noticeable. He was unable to repeat the alphabet straight through; he hesitated at some letters, and then said any letter at random. He was unable to say the letter D. He was given a child's picture-book.

April 11, 1917.—He could name objects around him more readily, but still hesitated.

April 18, 1917.—There was a marked improvement. He was able to read the daily paper.

May 2, 1917.—The wound was almost healed. He was allowed to go home.

May 22, 1917.—A few small pieces of bone have been discharged from the wound. The patient was very well. He had no headaches. He read easily, but soon became tired. When reading aloud he missed some words. He hesitated slightly when speaking.

#### Notes by Dr. A. W. Campbell.

The horizontal portion of the fracture runs almost parallel with the fissure of Sylvius, but at a slightly higher level, about 2.5 cm. The centre from which the fissures radiate is approximately over Broca's convolution. In such a case one would certainly expect motor aphasia, if the teaching of Charcot be correct.

The aphasia noted was probably due to oedema and bruising, and not to actual destruction of the brain substance by softening or hemorrhage, hence the recovery as this cleared up.

There was probably some bleeding from the pial vessels under the fracture, and perhaps from parts opposite (*contre coup*) to explain the blood-stained cerebro-spinal fluid.

Assuming that there was no extensive sub-dural hemorrhage (actually hæmatoma), which seems reasonable in the light of after events (good recovery), the period of unconsciousness was long, and points to severe concussion, oedema or bruising of the brain (a general shake up).

Dilatation of pupil.—There is an oculo-motor centre above and anterior to Broca's convolution, which might connect with the *sphincter pupillae* centre in third nerve centre.

My reason for bringing this case before your notice is that head injuries are always of interest, and more especially at present, owing to the war. In the present case there has been a good immediate recovery after a long period of unconsciousness, followed by temporary aphasia. The site of the injury was in the region of the area trephined in the sub-temporal decompression. Dr. Campbell pointed out to me the risk of that operation in connexion with the development of aphasia, when performed on the left side. My observations of severe head injuries during the past twelve years at the Sydney Hospital has made me regret that there has been very little, if any, improvement in the results obtained during that period, especially in regard to fractures involving the base of the skull. A recent communication to the *Journal* by one of our surgeons returned from France on the excellent results of decompression operations in cases of fracture of the base does not seem to coincide with experience in civil practice. The question of when to open the *dura mater* is always one of interest. Sir Victor Horsley, speaking to me at Anzac, advised opening the *dura* at once with antiseptic precautions if pressure

symptoms were present. Colonel Purves Stewart advised waiting to see the results of elevation of depressed fragments and avoidance of the risk of sepsis before opening the *dura mater*.

Injuries to the head in civil practice differ from those met with in military work considerably, in the absence of the violence caused by bullets or splinters of shell, and in the absence of sepsis as a rule.

## Reviews.

### COMPEND OF PHYSIOLOGY.

Professor A. P. Brubaker has brought out the fourteenth edition of his "quiz-compend" of physiology. This little manual is intended for students working for examinations as a supplement to the instruction given in a course of lectures. It is well written by a physiologist aware of the progress of his science during recent years. The author has considerable skill in choosing apt expressions in the description of physiological processes and functions which makes his account of them unusually clear and concise.

When this book is employed in conjunction with extensive notes of lectures or with a more comprehensive text-book, it serves a useful purpose as a brief summary of the subject. There is, however, a class of students who will take this compend for a text-book. Such students will gain little knowledge of physiology, though they may be able to pass the test of an examination. This book has no educational value, except as a synopsis of the chief facts and terms of physiology.

### SILVER WAR BADGE.

We have been requested by the Navy Board to publish the following notice:—

With regard to the Silver War Badge approved to be issued by the Imperial Authorities to officers and men who have served in His Majesty's Naval or Military Forces at home or abroad since the outbreak of war, the Minister for the Navy announces that badges are now available for issue to those persons eligible on account of service in any of H.M. Australian Naval Forces since August 4, 1914.

The badge will be granted to those who have served in His Majesty's Australian Naval Forces since August 4, 1914, whose service has been terminated on account of wounds or physical infirmity for which they were not themselves directly responsible, or who have been otherwise retired or discharged for causes beyond their own control, provided that they are not fit for military service by reason of medical unfitness, or being over age, and that their claims are approved.

The award will include the following:

Officers and men of the Royal Australian Navy, Permanent and Citizen Naval Forces officers and men of the mercantile marine serving under special naval engagements in His Majesty's ships and auxiliaries, and officiating ministers, civilian medical practitioners, and dental surgeons, who have given whole time service.

Badges will not, however, be issued to persons, otherwise eligible, who have subsequently been enrolled or enlisted in any of His Majesty's forces.

Forms of application for the badge may be had from the

District Naval Officer, Port Melbourne, Victoria.  
District Naval Officer, Edgecliff, Sydney, N.S.W.  
District Naval Officer, Hobart, Tasmania.  
District Naval Officer, Brisbane, Queensland.  
District Naval Officer, Fremantle, W.A.  
District Naval Officer, Birkenhead, S.A.,

as the case may be, and, when completed, application forms should be forwarded direct to

THE NAVAL SECRETARY,  
Navy Office, Melbourne.

<sup>2</sup> A Compend of Physiology, by Albert P. Brubaker, A.M., M.D.; Fourteenth edition, 1917. Philadelphia: P. Blakiston's Son & Co.; Crown 8vo., pp. 262, with 28 illustrations. Price, 6s.



## The Medical Journal of Australia.

SATURDAY, SEPTEMBER 1, 1917.

### Australian Surgery.

The pages of *The Medical Journal of Australia* bear evidence of the soundness of Australian surgery. In the present issue an address by Mr. Hamilton Russell on the treatment of fractures, in a recent issue a paper by Mr. H. B. Devine may be regarded as immediate testimony of the worth of our surgical practice. There are many names of Australian surgeons to conjure with, and their reputations have penetrated to every corner of the globe. The level of Australian surgery has been reached not only by reason of dexterity and operative skill; behind these qualities lie clinical acuity and physiological thought. The practice of surgery based merely of long series of cases, and sustained merely by trained fingers, would not be securely enough founded to emerge from the tests of competition with the work of the leaders in the surgical world. We have but to analyse a few chapters of surgery as practised and taught in the chief cities of the Commonwealth, to justify the pride we take in the eminence of many of its exponents.

While competent criticism demonstrates the excellence of Australian surgery, the legislators of the Commonwealth close their eyes to facts and turn elsewhere for assistance in the mechanical part of surgical work. Senator Millen informed the Senate, when introducing the Repatriation Bill for its second reading, that artificial limbs were being imported with a manufacturing specialist from America, in order that our armless and legless soldiers might be provided with substitutes for their lost limbs. Were Australian surgeons incompetent, it might be necessary to cover their defects by importing assistance from without. But we maintain that those of our surgeons who have specialized in orthopaedic surgery, are quite competent to train our own instrument makers to produce practical artificial

limbs, without assistance from across the seas. This movement on the part of the Federal Government to build up a system of care for returned maimed soldiers on imported material and labour is, no doubt, based on the policy long persisted in, of neglecting to establish a complete orthopaedic service within the Australian Imperial Force. Ingenuity and resource are required for the inauguration and planning of a workable scheme. We claim that these qualities can be found in many Australian surgeons. Good organization is necessary to ensure smooth working in a well-planned scheme. We have several good organizers. Skilled surgery, based on sound physiological principles, is an essential for an acceptable orthopaedic service. He would be a bold man who denied the skill of our surgeons.

We have advocated the retention of the returned soldier in the military machine, until science can do no more to improve his condition. The advantage to the incapacitated soldier over treatment under civil conditions, without any control, would be slight, unless the treatment supplied were part and parcel of a comprehensive scheme. Combined surgical care, physical education and industrial training should form the last stage of the graded orthopaedic course, through which each man with a certain class of disability should pass.

### WAR-TIME PROFITS.

On July 19, 1917, the Federal Treasurer introduced a measure, which he designated the War-Time Profits Tax Assessment Bill into the House of Representatives. This Bill was debated on the motion that it be read a second time between July 25 and August 23, when it was sent for consideration to the Grand Committee. In the main it may be stated that the measure provides for the taxation of an increment of income since the beginning of the war, no matter whether the extra profits are the result of a natural growth of business or of increased demands or increased prices due to the fact that we are at war. The first £200 of the excess is not liable to tax, while when the excess profit is over £200, the taxable portion is reduced by one pound for every two pounds by which the excess is over £200. The pre-war standard of profits is to be calculated as

the actual net profits based on the average of any two of the three last pre-war years, save when it can be shown that these three years covered a period of abnormal depression. In the original Bill businesses exempted included "any profession the profits of which depend mainly on the personal qualifications of the person by whom it is carried on, and in which comparatively little or no capital expenditure is required." As the Bill reached the Committee stage, various amendments were introduced by the Treasurer, and among them was the withdrawal of the proposed exemption of members of professions. We have therefore to draw attention to the proposed legislation, as its enactment in its present form would affect medical practitioners very seriously. The tax would be payable in respect of excess income earned during the financial year 1915-1916, as well as each succeeding year. That means that the tax is retrospective, although the rate for the year 1915-1916 suggested would be less than the tax for ensuing years, the rates suggested being 50% and 75% respectively. The amended Bill provides for an alternative method of assessing the pre-war standard of profits by professional men. The income earner may elect to return his pre-war income as £600, instead of returning the actual average of any two of the three last pre-war years.

A great deal could be said in opposition of a measure aiming at war-time profit taxation, instead of war profit taxation. The principle, which is bad in any case, is unsupportable in the case of a medical man who earns his income, not as interest on capital or by the production and sale of commodities in demand, but by the application of knowledge laboriously acquired through years of study for the benefit of suffering mankind. The income of a medical man increases in the normal course of events as the result of a recognition by the public of his skill, knowledge and personal attributes. It may follow merely as a result of a larger amount of work performed during a greater number of hours daily, or when the individual doctor has established a firm reputation, by an increase of fees. To impose an additional tax on a young practitioner before he is firmly established, because his income is increasing, would be to handicap his chances of making a reasonable income as long as the war lasts. It would

be unjust from every point of view. The increase in the income of the better established practitioner should not be interfered with merely because it is an increase. There has been some irresponsible speaking recently of medical men earning from £15,000 to £16,000 a year, and these utterances have naturally been echoed by members of Parliament during the debate. The Federal Government, however, appears to have a more reasonable grasp of the actual position, and fixes an average medical man's income at £600 a year. If there are any surgeons or physicians whose experience, skill and knowledge have rendered them so popular that they are able to earn over £5,000 a year, it would be obviously illogical to base legislation on this possibility. Many medical men have undertaken to look after the practices of their colleagues who are absent on military duty, and in the majority of these cases, the extra fees thus earned, out of hours, as it were, are divided between the absent practitioner and the man who does the work. We cannot conceive how any Treasurer could justify an attempt to make these men pay three-quarters of this additional income, which has been earned under the pressure of circumstances, and which represents but a moiety of the normal fees for work done. The popular man may find additional opportunities for expanding his activities and for making a larger income, because so many medical men are at the war. But these are the exceptional cases, and the generosity of these men toward the national funds and toward their less fortunate colleagues is notorious. Lastly, it should be urged that the gross income of a medical practitioner is a very different thing to his net profits. The expenses of a large practice, over and above the deductions allowable for income tax purposes, are very considerable, and the proposed tax would add additional burdens to these.

There is no redeeming feature in the Bill as it would affect medical practitioners, and it is urgently necessary to protest against their inclusion.

#### SURGICAL SHOCK.

The condition known as surgical shock is a subject which interests every surgeon. It covers that uncanny something which robs him of his patient in spite of correct surgical intervention, skilfully applied. Many attempts have been made to ascertain

the physiological explanation for this condition, and much ingenuity has been exercised in the researches aiming at a solution of the problem. Within recent times, the teaching of Crile, which is based on physiological conditions of vasomotor changes and histological observations on the nerve cells of animals in a condition of shock, have commanded attention. Crile studied the physiology of lowered blood pressure, since it had long been noted that in shock the blood pressure was very low. He taught that this low pressure was associated with a relaxation of the arterioles. On this basis he built of a theory of shock on which modern treatment is founded. No treatment can be regarded as sound, unless it is planned in consonance with the physiological changes which the condition requiring treatment comprises. The danger of testing the accuracy of the physiological interpretation of a condition by the results of treatment is obvious. It can never be determined whether a method of treatment is correct, until full physiological proof is forthcoming of the nature of the disturbance. Professor W. B. Cannon, of the Harvard Medical School, has raised the question of the actual primary factor concerned in shock in his Shattuck Lecture.<sup>1</sup> He attempts to arrive at an accurate estimation of the significance of the various known factors associated together in shock. A consideration of the clinical manifestation of a case of surgical shock reveals that there are disturbances of sensation, disturbances of motion, disturbances of respiration, and disturbances of the function and control of the circulation. It is unnecessary in this place to follow his reasoning which leads him to the conclusion that the three first factors are of secondary significance. The disturbances of circulation include those changes attributed to a low arterial pressure, pallor, a small, thready pulse and a cold skin. The small pulse suggests that the heart has actually a small amount of blood to put forth at each contraction. This would account for the low blood pressure, and Professor Cannon therefore assumes that the diminished output from the heart is primary in causing the low pressure. Howell and Mann have demonstrated that there is no paralysis of the cardio-inhibitory centre. Marey's law of the reciprocal relation between heart rate and arterial pressure apparently holds good in shock. Since the heart is not defective, he passes on to a consideration of the condition of the blood vessels in shock. Notwithstanding the doctrine elaborated by numerous physiologists and further developed by Crile that the lowered arterial pressure is associated with a relaxation of the arterioles, he points out that in hæmorrhage the pressure is low because the amount of blood contained in the systemic vessels is small, and consequently it does not follow that a low pressure in shock need be caused by dilatation of the arterioles. W. T. Porter demonstrated that both pressor and depressor reflexes still occurred when an animal passed into a condition of shock. Arguing on the premise that the vasomotor centre is not exhausted, he adduced evidence to show that the systemic arterioles are tonically con-

tracted. Seelig and Lyon found that severing of the nerve of a cut blood vessel in an animal in the state of shock resulted in an increase in the bleeding. The clamping of the aorta of a rabbit during shock by suddenly raising the blood pressure greatly distends the arteries of one ear whose nerves have previously been divided, but not those of the other ear whose nerves are still connected with the vasomotor centre. Having arrived at this point, he asks himself the question: Why does the blood not accumulate in the arteries, if the vasomotor centre is efficiently at work? The only satisfactory reply lies in the recognition that the volume of available blood is diminished. He explains the diminution in volume by suggesting that the great mass of blood is being held up in the splanchnic area. Blood laden with carbon dioxide causes the vessels in which it is contained, to relax and become more capacious. There is further an anatomical circumstance which is of importance in this connexion. The portal system is peculiar in that its vein lies between the capillaries of the stomach, intestines, spleen, and pancreas and the capillaries of the liver. The former deliver their blood into the mesenteric branch of the portal vein, while the latter deliver their blood into the hepatic veins *en route* to the *vena cava*. He shows that a considerable force is required to drive the blood through these two sets of capillaries. Professor Cannon assumes that all the arterioles in the body are contracted in shock, and consequently the fine branches of the portal vein in the liver are also contracted. Once the blood is accumulated in the portal area to a degree sufficient to stimulate the vasomotor centre to greater activity, the blood is trapped in the area.

Before these highly ingenious suggestions can be accepted, further evidence is required in their support. The assumption that systemic arterioles are contracted in shock is an entirely new one, and is unlikely to find general acceptance on the evidence at present available. On the other hand, the reasoning used by Professor Cannon is systematic and logical. Much depends on the acceptability of W. T. Porter's contention that the vessels retain their tonic activity during the condition of shock. Physiologists have now the duty of testing this theory and of either disproving it or establishing it. If the deductions be well founded, shock should be amenable to treatment without special difficulty.

#### THE OPTICIANS' BILL.

The Opticians' Bill was read a second time in the Legislative Assembly, Queensland, on August 21, 1917, and passed through the Committee stage on the following day. A few amendments were introduced and agreed to. None of them will have the effect of limiting the scope of the Bill to the licensing of opticians as spectacle makers. The third reading was reached on August 23, 1917, and received the support of the majority. The first reading took place on the same day, in the Council, and the second reading was fixed for August 28, 1917. We trust that the members of the Legislative Council will be guided by the sound advice which the Honourable William Frederick Taylor gave last session, and will refuse to sanction a measure which is against the interests of the public, and fraught with grave dangers.

<sup>1</sup> The Boston Medical and Surgical Journal, June 21, 1917.



## Abstracts from Current Medical Literature.

### DERMATOLOGY.

#### (70) Palmar Syphilides.

In describing the palmar syphilides, Howard Fox (*Americ. Journ. of Syphilis*, April, 1917), while not recognizing the so-called secondary and tertiary periods, finds it convenient to use the term early syphilides for those eruptions occurring in the first year of the disease, and late syphilides for those occurring subsequently. He states that the early palmar syphilides are generally regarded as being papular, but are in point of fact macular, and this must be attributed to the thickness of the horny layer of the skin of these parts. This eruption upon the palms may occur either independently, or be associated with a lenticular papular rash on other parts. The lesions appear as dull red, pea- to bean-sized, discrete spots, which, unless few in number, are invariably present upon both palms, an important point in diagnosis, for the late syphilides generally occur upon one palm. In the majority of cases, this form of eruption soon tends to scale, but when desquamation fails to take place, the diagnosis may have to be made from *erythema multiforme*, which occasionally presents itself as discrete, macular lesions upon the palms, associated with bullous lesions of the mouth. The late palmar syphilide may manifest itself, either as the ordinary nodular or gummosus syphilide, which usually spreads serpigiously, and may or may not ulcerate; or as the more important squamous syphilide, which in the new official nomenclature of the American Dermatological Association, has been subdivided into circinate and diffuse forms. The circinate is the rarer of these, and it may be necessary to make a clinical differentiation from ringworm. The border of the lesion in ringworm is more apt to be complete, of a reddish and inflammatory colour, and the periphery may sometimes exhibit tiny vesicles. The diffuse form may closely resemble psoriasis, eczema, and seborrhoeic dermatitis. But psoriasis of the palms is most frequently to be found associated with psoriasis of other parts of the body. Eczema is the eruption which is most likely to lead to confusion, and the dry squamous type is the one which most closely simulates the squamous syphilide. The following points in the differential diagnosis should be borne in mind. The squamous syphilide is generally localized to the centre of the palm, whilst eczema is apt to extend on to the palmar surfaces of the fingers. In syphilis the borders of the patches are liable to be sharply defined, whilst those in eczema usually merge into the normal skin. Itching, a frequent symptom in eczema on other parts of the body, may be

absent on the palms. When a doubtful eruption occurs upon one palm, in nine cases out of ten it is syphilis; but when it occurs upon both palms, in nine cases out of ten it is eczema. Again, the Wassermann reaction should prove useful, but would not definitely decide that any special lesion was syphilitic; moreover, in a number of these cases of late syphilides this reaction is negative. The treatment of these late lesions with mercury is often unsatisfactory, but salvarsan gives excellent and often brilliant results.

#### (71) Röntgen Ray Treatment of Malignant Disease.

Case deals with the present status of Röntgen ray treatment of deep-seated malignant disease (*Surg., Gynecol. and Obstet.*, May, 1917). He considers that operable cancers should be submitted to operation and not to radio-therapy, but that Röntgen rays should be used as a prophylactic against recurrence. He advises irradiation both before the removal and after it. The extravagant claims of practitioners using these therapeutic agents without sufficient training have evoked criticism against the use of radium and Röntgen rays for treatment purposes. Wickham and others have recorded histological changes in the cells of new growths after irradiation, proving that the effect is undoubtedly one of destruction. He points out that the action is purely a local one, and that a cure is often not effected because the rays do not reach the secondary deposits. In comparing the destructive effect of radium with that of hard Röntgen rays, he calls attention to the fact, which is not generally recognized, that hard Röntgen rays, which are readily obtainable, have almost as great a penetrating power as the harder  $\gamma$  rays. The radiant energy of hard X-rays that can be produced by a modern X-ray tube is several hundred times the amount of radiant energy obtainable from even large quantities of radium. He considers, however, that radium should be combined with Röntgen rays in certain forms of treatment. He has come to the conclusion that the infrequency of cures is due to two facts. The first is that the treatment is usually inadequate, owing to the insufficient training of those in charge of Röntgen ray equipment. The second fact is that the destructive effect of the Röntgen rays is purely local. In spite of this, he holds that much may be done in a palliative way. The irradiation may relieve pain and may limit the secretion from the ulcerating surfaces. Ulcers may thus be stimulated to heal over. Even when the patient succumbs to recurrent malignant disease, the progress of the recurrent tumour is speedy, and death from it is much less distressing than death from the primary lesion.

#### (72) Multiple Cartilaginous Exostoses.

In reviewing the clinical aspects of multiple cartilaginous exostoses, J. T. O'Ferrail (*Med. and Surg. Journ.*, June,

1917) points out that the condition is more common than was previously thought to be the case. Heredity is stated to be a factor in the causation. The condition is apparently transmitted more frequently through the male members of the family than through the female members. The proportion is about three to one. Males are more liable to the condition. The clinical history usually dates back to early life. The symptoms vary with the localization and size of the tumours, and depend on the pressure exercised. The tumours occur in varying sizes and number in the proximity of the epiphyses, the shaft of the bones being free.

#### (73) A Unique Case of Favus.

R. A. McGarry (*Journ. Cutan. Diseases*, April, 1917) states that it is unusual for favus to affect regions other than the scalp and non-hairy parts of the body. After reviewing the literature, he finds cases reported in which the outer surface of the prepuce, the scrotum and the pubic region were affected, while a post-mortem examination of one reported case revealed the fungus in the oesophagus, stomach and intestines. The author records a case in which the scalp, eyebrows, eyelashes, pubic region and glabrous skin were simultaneously involved. The disease first manifested itself three years before with itching of the scalp. This was followed by desquamation, and finally thick crusts developed. The areas were plucked by a few hairs, and when dislodged revealed reddened, somewhat shiny pits or depressions. There was a pronounced mousy odour from the scalp. Later, the eyebrows and eyelashes, as well as the skin of one ear, became involved, with dried adherent crusts of a dirty, greyish-yellow colour. Finally, the pubic region became involved, but in this region the crusts were more superficial. The *Achorion schönleini* was demonstrated microscopically in the scutula and in the hairs from all the affected regions.

#### (74) Tinea Tonsurans.

W. Jenkins Oliver describes a case of ringworm of the scalp of the ordinary human type (*Microsporon audouinii*) in a woman aged 33 years (*Brit. Journ. Dermat. and Syphilis*, January-March, 1917). The patient's two children were similarly affected, and contagion could probably be ascribed to the use of the same hair comb. On examination, there was a round, reddish area, about the size of a shilling piece, in the right occipito-parietal region. This patch was slightly scaly, with several broken hairs, which, on microscopical examination, showed a microsporon sheath. Cultures produced a definite woolly surface, with a thicker raised central portion, which in some tubes resembled a knob or disc. In waterdrop preparations the *fuscaus multiloculares* were absent, indicating the microsporon of human origin, which was suggestive of the *M. velveticum*, described by Sabouraud in 1907.

## BIOLOGICAL CHEMISTRY.

## (75) Nutritive Value of Heated Proteins.

A. G. Hogan has studied the effect of heating proteins in an autoclave on their nutritive properties (*Journ. Biol. Chemistry*, May, 1917). White rats have been fed for periods of six months or thereabouts on diets of unheated maize, of heated maize, of unheated maize and egg-white, or of heated maize and egg-white. Some mineral salts have been added to the ration to compensate for the mineral deficiencies of maize. The heating process has consisted of six hours' steaming in an autoclave at 30 pounds' pressure. The rats have ceased to grow when the diet contained heated corn. The younger animals died after four or five months, during which time they maintained a more or less constant body weight. Control rats fed on the same ration unheated would grow from a weight of 40 gm. to a weight of 200 gm. in the same time. The adult rats steadily lost weight. In order to ascertain whether some alteration in the properties of the protein rather than destruction of the accessory accounted for these results, the author heated egg-white for six hours at 30 lbs. pressure. Rats have been fed on butter, starch and agar along with enough heated protein to form a ration containing 9% protein. Protein-free milk has been added to this diet to supply the accessory. The rats have grown well. A series of feeding trials have also been conducted with three samples of heated casein. The casein has been steamed for two hours, in the first case at 15 lbs. pressure, in the second case at 30 lbs. pressure, and in the third case at 45 lbs. pressure. Four series of rats have been fed on diets containing 12% protein in the form of unheated caesin or of one of the heated caseins. In all cases animals of the same sex have grown at the same rate, indicating that the nutritive value of the casein has not been lowered by the high temperature.

## (76) Hæmic Changes After Concussion.

M. Loeper and G. Verpy have studied the changes which occur in the blood after concussion caused by the bursting of shells (*C.R. Soc. Biol., Paris*, October 21, 1916). Concussion is accompanied by certain nervous phenomena and by changes in the general blood-pressure which have been ascribed to nervous influences. Some of these patients exhibit hæmaturia, and are thought to suffer from suprarenal hæmorrhages. Considerable alterations are observed in the physico-chemical equilibrium of the blood. The molecular concentration, as measured by cryoscopic methods, is at first increased, is later lower than normal and slowly regains the usual level. The freezing-point may be as low as  $-0.84^{\circ}$  C. two days after the receipt of the injury. The amount of chloride of sodium in the serum bears no relation to the molecular concentration. On the other hand, the glucose in the blood is more nearly parallel to the freezing-

point. In the early days after the injury the amount of glucose is increased to 1.5 parts in 1,000 parts of serum. The amylolytic activity of the blood also appears to be parallel to the molecular concentration. Similar changes have been caused by the authors in rabbits which have been subjected to shock. In these animals hæmorrhages occur into the suprarenal capsules. In consequence of these changes in the suprarenal capsules, glycogen may disappear completely from the liver. The authors consider that these experiments supply the key to the production of the similar effects in man.

## (77) Paralysis During Antirabic Treatment.

A. Rochaix and P. Durand have shown by the reaction of Abderhalden with ninhydrin that antibodies for human brain substance are present in the blood of a patient undergoing treatment against rabies (*C.R. Soc. Biol., Paris*, October 21, 1916). It has been known for some years that antibodies against rabbit's brain substance appear during the immunization for hydrophobia. In some cases a feeble reaction with human brain has been observed. The paralysis set in on the fifteenth day of treatment, and progressed for two months. The patient had not recovered after ten months. Blood was taken by venous puncture 8, 16 and 60 days after the onset of the paralysis. The first two samples gave strong positive reactions with the cerebral substance of rabbits and men, but not with that of the guinea-pig. The third sample reacted also with the brain substance of a dog. These results lend support to the view of Marinesco that the paralyzes which occur during antirabic treatment, are due to cytotoxic substances developed as a result of the injection of the cerebral material of the rabbits employed in the immunization.

## (78) Toxic Action of Pancreatic Extracts.

E. W. Goodpasture has tried to ascertain the chemical nature of the substance in extracts of the fresh pancreas which occasions death in dogs after intravenous injection (*Journ. Exper. Medicine*, February, 1917). Freshly prepared extracts of the pancreas, made with physiological salt solution, cause a transient fall of blood-pressure upon intravenous injection. Some hours later vomiting sets in, accompanied by profuse bloody diarrhoea. The temperature of the body falls, the respiration becomes slow, the heart beats rapidly, coma develops and death ensues. Autopsy reveals intense splanchnic congestion, spontaneous hæmorrhagic necrosis of the pancreas, focal necroses in the liver and hæmorrhage into the bowels. These effects have been ascribed to autolysis of the pancreatic tissues, and the toxic agent has been considered to be either the ferment, trypsin, or the products of the decomposition of the protein. Since freshly prepared extracts are toxic, it is obvious that the symptoms are not

due to trypsin, which is not formed in pancreatic extracts for some hours. The fraction of the gland containing  $\beta$ -nucleoprotein exhibits all the toxic actions of extracts of the whole gland. This fraction contains guanylic acid in addition to the protein. Pure guanylic acid made from the nucleic acid of yeast has no toxic action upon intravenous injection into dogs. The toxic effects may therefore be held to be caused by the protein. The toxicity of extracts of the pancreas diminishes as autolysis proceeds, and disappears after some days. Since prolonged boiling is used in the preparation of  $\beta$ -nucleoprotein, the toxic body is thermostable, and unlikely to be an enzyme.

## (79) Creatinuria in Children.

W. Denis and J. G. Kramer have studied the excretion of creatin in the urine of children in relation to the amount of protein ingested in the food (*Journ. Biol. Chemistry*, June, 1917). Creatin does not occur in the urine of adults, but occurs in normal and pathological urine from children up to puberty. The experimental method employed in all the cases has been the administration of a diet free from creatin. During the first period the protein intake has been as high as possible. In the second a diet containing a minimal quantity of protein has been given, and this period has been followed by a third period, in which the diet has been rich in protein. Creatinin and creatin have been estimated by Folin's micro methods. The subjects have been four children, aged five or six years, and an infant of 13 months. The amount of creatin in the urine depends on the quantity of nitrogen ingested in the food. The creatin occasionally disappears from the urine, when the amount of protein taken as food is low. The authors believe that the appearance of creatin in the urine of children is associated with the low saturation value of the muscles for creatin in children.

## (80) Biological Efficiency of Potato Nitrogen.

M. S. Rose and L. F. Cooper have tested whether nitrogenous equilibrium could be established upon a diet in which the whole of the nitrogen was derived from the nitrogenous compounds present in the potato (*Journ. Biol. Chemistry*, June, 1917). The subject of the experiment was a healthy young woman, weighing 50 kilos. The diet of a fuel value of 2,000 calories consisted of potatoes, butter and sugar. Nitrogenous equilibrium was established on the fourth day with an intake of nitrogen averaging 4.8 gm. daily. This equilibrium was maintained for seven days on a total intake of 0.096 gm. nitrogen per kilo. body weight, which is equivalent to a net intake of 0.068 gm. nitrogen per kilo. body weight. The authors are of opinion that the potato is a source of nitrogenous compounds of high nutritive efficiency, despite the fact that only 63% of the nitrogen is stated to be in the form of protein.



## British Medical Association News.

### SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on July 27, 1917, Dr. R. Gordon Craig, the President, in the chair.

The President introduced Mr. R. Hamilton Russell, who had come at the invitation of the Branch from Melbourne to address them on the subject of recent fractures. He stated that it was scarcely necessary to remind members that Mr. Russell was a leading surgeon in the city of Melbourne, and that his reputation spread beyond the confines of Australia, and was international. He pointed out that the Branch had initiated a practice of inviting practitioners from other States to address meetings, and he hoped that this practice would become general. He was sure that Mr. Hamilton Russell's address would lift their surgery and surgical practice out of provincialism, and that the inter-State deliberations would do much to enhance the reputation of Australian surgical science.

Mr. R. Hamilton Russell was received with loud applause from a large gathering of members. He then read his address on the rôle of operation in recent fractures, the text of which will be found on page 177.

Dr. J. Morton expressed his gratitude to Mr. Hamilton Russell for having travelled so far, and for having delivered so excellent a lecture. His method of dealing with fractures was certainly revolutionary. They had been accustomed to stereotyped notions that did not harmonize with his views. The only part of the paper which Dr. Morton felt inclined to argue about was that dealing with the causes of overriding. The explanation given was very ingenious, but he did not think that it was quite satisfactory. It was just as easy to explain on the assumption that the muscles were trying to keep the parts quiet and to save the patient pain. He pointed out that the relief from pain was effected by extension. The patient contributed both voluntarily and involuntarily to the saving of pain. He did not think that the muscles were concerned in the results obtained. He acknowledged that the pillow method of splinting would yield good results, but he thought that equally good results could be obtained by older methods with proper supervision. He held that it was a great mistake not to inspect the limb daily. If it were necessary, an anæsthetic should be used frequently. In regard to the operative treatment of fractures, the results were excellent in cases in which this form of treatment was required. Once anatomical rectification of the displacement had been obtained, it was necessary not to leave the limb quiet too long. Were it not for the risk of sepsis, he would be prepared to accept Lane's practice more freely. He raised the question whether it was better to trust to chance in fracture of the neck of the femur, or whether one was justified in interfering. In conclusion, Dr. Morton said that he was very glad that he had had the opportunity to have heard Mr. Hamilton Russell deliver his lecture. He was convinced that it would lead to a considerable advance in the treatment of fractures generally.

Dr. W. R. Litchfield wished to record his thanks to Mr. Hamilton Russell for having responded to the invitation of the Council of the Branch. He was one of the initiators of the practice of inviting distinguished members of other Branches to address them. He claimed that the experiment so far had proved to be a success.

Dr. R. B. Wade also added his thanks. He considered that Mr. Hamilton Russell had gone a step further than Lane. Lane had introduced his method on account of the extremely bad results obtained. He cut down to repair the damage. Mr. Hamilton Russell showed how it was possible to obtain the same results by mechanical methods, which would be available for all general practitioners. From the orthopædic point of view, the bad results were not so much due to shortening as to bad alignment. It was quite common to meet with angulation at the site of fracture. The result of this angulation was that muscle groups were thrown out of balance. Some were shortened and some lengthened. In the case of fracture of the bones of

the lower extremity, the result of shortening was that the pelvis would have to drop with each step during walking. The shortening might become exaggerated if the limb were used too early. He found that a Thomas's splint relieved the limb of the weight of the body, and thus obviated shortening. In the next place, Dr. Wade dealt with fractures involving joints. At times the fracture limited the full movement. It was difficult to get proper alignment in these fractures. In the case of Pott's fracture valgus resulted from this cause, and in fracture of the bones of the wrist supination was frequently caused. Robert Jones had been the first to call attention to the danger of employing passive movement injudiciously. Active movement was very excellent. Passive movement should only be used up to the point of causing pain. Under these circumstances it would do no harm, but it probably would do no good. Unless great care were exercised, the periarticular tissue would be damaged. It was very easy to cause hæmorrhage into a joint in breaking down adhesions. On the other hand, active movements would stop short of rupturing the capillary vessels and the adhesions, and, if persistently applied, would yield much better result.

Dr. F. P. Sandes said that anything Mr. Hamilton Russell put his mind to would supply the profession with valuable food for reflection. He had been somewhat surprised at some of his views. The most revolutionary statement was that overriding was not due to muscular action. His own experience had taught him that extension was often difficult to apply because of muscular action. He had been interested in the remarks concerning passive movement, and in future would be more careful in his practice. It would, he thought, have been of value had Mr. Hamilton Russell shown skiagrams of the bones of a limb put up in the pillow splint. He had applied the apparatus for extension in cases of fracture of the middle and upper third of the femur in a few cases. The results were good. He was, however, inclined to think that equally good results could be obtained by the older and more conservative methods of treatment.

Dr. J. Moran considered that faulty alignment of the femur was not necessarily inconsistent with good functional results. Dealing with Mr. Hamilton Russell's method of extension, he pointed out that when the patient raised himself in bed, counter extension was done away with, and consequently the extension was put out of court. He was a firm believer in extension for fractures of the bones of the upper arm. He had used Hey Groves's splint, and had seen the immense value of this apparatus in Mesopotamia. The comfort and ease to the patient were remarkable, and the alignment obtained in the majority of the cases was good. He always taught this method of extension to his students. He failed to understand why extension should be adopted for fracture of the femur, and not for fracture of the humerus. He had come to the conclusion that it was reasonable to employ operative treatment when extension splints failed to yield good results. The surgeons on active service had obtained excellent results from the ordinary Thomas's splint. The disadvantages of this splint, however, were that the knee tended to become stiff and the splint at times chafed the buttocks. For the upper extremity, he held that Hey Groves's splint was better than the Thomas's.

Dr. Charles MacLaurin pointed out that, after the bones of the leg had been fractured, spasmodic action of the calf muscles resulted in the pointing of the foot. If this action were continued, the pointing would become permanent and the deformity would be very crippling. External rotation of the foot was another serious result of fracture. The use of right angle splints tended to prevent this deformity. Since he had read Lucas Champinonnière's views, he had given up using splints, and had indulged in daily moulding of the limb, massage, etc. He spoke of Lane's enthusiasm, which was sufficient to convince any lawyer that operation was the correct treatment for all fractures, save that of the clavicle. The reason for this exception was that the majority of the patients were treated in the outpatient department. Those following his teaching claimed that they got results equal to those that Lane obtained, or that he thought he obtained. As years went on, surgeons had got less and less eager for the patients' gore,







and at the present day but few patients were required to submit to operative treatment, except for fractured femora. Dr. MacLaurin dealt with the difference between fractures through the narrow portion of the neck of the femur and those through the thick portion, and explained on anatomical grounds the reason why the former were more serious. The treatment of fractures in the former situation was extremely unsatisfactory, and non-union was common.

Dr. John Flynn stated that he had read with great interest and not a little pleasure Mr. Hamilton Russell's article on the treatment of fractures in *The Medical Journal of Australia* of August 12, 1916, and that he had listened with somewhat similar emotions to his address on the same subject. Both the article and the address should, he thought, be considered under a twofold aspect: (a) that of the practical surgeon, and (b) that of the physiological basis on which the treatment indicated rested. Time and experience would vindicate Mr. Russell's ingenious device of applying traction in the long axis of the femur in fracture of that bone, and of placing the leg in a position of physiological rest in the case of fracture of the tibia and fibula. As to the physiological basis on which it rested, it was necessary to have some clear thinking on what occurred when (a) the fractured limb was pulled straight down, and (b) when it was placed in the flexed position before traction was applied. When a fractured limb was pulled straight down, there was set up a simultaneous shortening of both synergistic and antagonistic muscles, due to reflex contraction. This shortening had in it nothing special to fracture; a somewhat similar condition occurred in an inflamed joint, and even in an inflamed appendix. There might be a difference in the routes through which the message was dispatched, but the nature of the message was substantially the same. In the case of fracture, the afferent impulse was transmitted upwards from the cells of the posterior ganglia, some to the grey matter of the cord, of which some subverted the muscle reflex; others to the fibres which constituted the posterior median column to the *medulla oblongata*, and their impulses passed, in part at least, to the co-ordinating middle lobe of the cerebellum. They were then passed on to the motor cortex of the cerebral hemispheres, where the efferent or descending impulses were primarily arranged, to come back to the muscle through the pyramidal tract. It was then waste of energy, to say the least, to have to overcome this simultaneous shortening of both flexor and extensor muscles by what might be called brute force, if such simultaneous shortening of both synergistic and antagonistic muscles could be annulled or prevented by mere posture. He therefore enquired into the question of what took place in antagonistic muscles, when the limb was placed in the flexed position. Here there was no question of simultaneous shortening, but of a variation in the length of one set of muscles, with a corresponding lengthening of the antagonists. Dr. Flynn drew a simple scheme of two antagonist muscles, with their respective nerve, each in connexion with its nervous arc. Both arcs were represented as being so connected that when a nervous impulse was sent along one, it drained off from the other arc as much nervous potential or nerve energy as sufficed to keep the muscle supplied by the latter in a state of tonus, with the result that the muscle of the latter became relaxed. Sherrington had demonstrated that the activity of the nervous arc kept the muscle fibres in a state of plastic tonus; the tension due to tone in the muscle remained unaltered, no matter what position the limb assumed. The position of physiological rest, as seen in the sleeping child and described by Mr. Hamilton Russell, was one of suspended tonus and not of absence of tonus.

Robert Jones had recommended Thomas's knee splint practically for all thigh fractures, except those near the trochanter, for which he had devised his abduction frame, and for all fractures of the knee joint and of the upper and middle thirds of the leg. The knee, however, was kept straight and stiff, and the tense muscles were in the first position and not in the second. Mr. Hamilton Russell placed the limb in a position of physiological rest, thus removing the extra tension in the extensors due to contraction necessary to bring the limb in the straight position, and also removing the extra contraction of the flexors due to the stimulation caused by traction in straightening

the limb. Following the lines indicated in treating a fracture meant the application of a definite force in a definite direction, with a view to overcoming a definite resistance to bring about a definite result. In conclusion, Dr. Flynn said that, though it was not admissible to apply all the facts as elicited by Sherrington with regard to muscles to the case of fracture, whose synergic control had undergone a wide modification from the normal, it would be equally wrong to ignore them, and Mr. Russell had added another laurel of originality to his surgical fame that would in the near future reach, if it did not excel, what he had already achieved in the radical cure of hernia.

Dr. N. D. Royle referred to his experience in the medical gymnastic department of the Royal Prince Alfred Hospital. In this department they were able to control the after-effects of treatment. He had come to the conclusion that active movement and those measures that tended to reduce muscular irritability, were not applied sufficiently early. He was inclined to interpret Lucas Champollionnière's teaching in regard to passive movement to mean that it should be applied in such a manner that the muscles were exercised gently. It was often wise to move the joints of the small child with caution a few weeks after the fracture. He had no doubt that this effected a reduction of pain. Active movements, however, were preferable in every case. As a rule, immobilization was used far too long. In conclusion, Dr. Royle referred to a few special cases that had come under his notice.

Dr. H. S. Stacey agreed with Mr. Hamilton Russell concerning the importance of getting the fragments into position, rather than keeping them in position. The initial reduction was the most important of all. Although Dr. Flynn had stated that splint treatment was not ideal from a physiological point of view, Dr. Stacey had a high opinion of Robert Jones's splint. One of the advantages of this splint was that the patients could be allowed to get about within a few days. Robert Jones used the abduction frame. Mere abduction while the patient was in bed was not sufficient. He referred to his experience when leaving Australia for the front. He had had a number of these splints made in Australia, and had every reason to congratulate himself that they were handy when required. The army in France was now well supplied with Robert Jones's splints. He also referred to Major Sinclair's glue for applying extension. Robert Jones's teaching in regard to fractures was essentially conservative. He was convinced that if early treatment were employed, the need for operation would not arise very often. He had tried many modifications of Jones's splint, but had come to the conclusion that few, if any, constituted a real improvement. He agreed with Mr. Hamilton Russell in regard to external rotation.

Dr. W. J. Stewart McKay could not agree with Mr. Hamilton Russell in his statement that muscular action did not cause the displacement of the fragments. If it were not muscular action, he failed to see what it could be that caused overlapping. Moreover, Mr. Hamilton Russell admitted that, in the case of the femur, muscular action did produce the shortening. If a rule applied to one bone, surely it must apply to all.

Dr. A. S. Vallack referred to the difficulty in getting the foot into a good position in Pott's fracture. He agreed that when the fracture was properly reduced there was little difficulty in keeping the fragments in position, but this was rarely possible in Pott's fracture. He asked Mr. Hamilton Russell whether he had applied the method adopted in the case of infants, of strapping the thigh on to the abdomen for adults. He suggested that the indignity of the position might render the method unacceptable. He spoke favourably of giving the patients employment at a relatively early stage. Chopping wood, using a saw and other exercises, were, he was convinced, preferable to mechanical means for getting rid of adhesions. Many patients would do better without any treatment at all.

Dr. R. Gordon Craig pointed out that satisfactory results could not be obtained, unless the alignment were perfect. Every defect in alignment meant an alteration in the mechanics of the whole skeleton. He referred to the effect on the pelvis of the smallest amount of shortening. Referring to the question of Pott's fracture, he agreed that it was the most difficult of all to treat. Lane had stated



that no policeman was ever able to return to duty after having sustained a Pott's fracture. He referred to the case of an international footballer, in whom limitation of the movement of the joint was marked after a Pott's fracture. He had been compelled to operate on this case. The fragments were got into apposition by means of leverage, and the foot stayed in position.

Dr. Gordon Craig wished to be convinced that muscular action did not play a part in the production of overriding. He could not understand why it should be true for the femur and not for other bones. On the other hand, he admitted that excellent results were obtained in war casualties when the bones were shattered. He suggested as an explanation that an exudation was thrown out into the periosteum, and that this formed a sufficient resistance to maintain the shape of the bone. Muscles had the power of adapting themselves to circumstances. Even if they did not cause the displacement, they certainly maintained it. He had been greatly struck by the results obtained by Mr. Hamilton Russell. He had never seen these results equalled, save after operative treatment. When Lane's plates were used, it was impossible to say when the fragments would unite. There was apparently no stimulation of the healing process. Every now and then, union was delayed for several months after Lane's treatment. He raised the question as to when the patient should be allowed to walk after a fracture of the femur. Callus did not solidify until twelve weeks had elapsed, when the fragments were overlapping. He thought that, until they could be certain of obtaining accurate alignment, they should not allow the patients to walk for twelve weeks. He had found that heat and tenderness were valuable indications of non-union.

Mr. Hamilton Russell expressed his warm thanks to the President and the members for the splendid reception they had accorded him, and his appreciation of the interesting remarks of those who had taken part in the discussion, and especially of Dr. Flynn. In reply to Dr. Stewart McKay, he referred him to his previous article for the explanation sought. In the case of fracture of the thigh bone, the muscles traversed from the pelvis to the leg, and any physiological shortening of them must necessarily result in the points of insertion being brought closer together. He agreed with the speakers who held a high opinion of Robert Jones's splint, and pointed out that the conditions of war surgery were quite different from those of civil practice. His extension apparatus would be quite useless for war purposes.

Dr. W. H. Crago moved a hearty vote of thanks to Mr. Hamilton Russell. The motion was carried by acclamation.

A meeting of the Queensland Branch was held on August 3, 1917, at the B.M.A. Rooms, Adelaide Street, Brisbane, Dr. W. F. Taylor, the Vice-President, in the chair.

Dr. J. Lockhart Gibson showed a boy, aged six years, who was suffering from post-neuritic optic atrophy in both eyes, following lead poisoning. Dr. Gibson stated that the patient had been in the habit of biting his finger nails. A squint had developed suddenly in the course of what his medical attendant took to be an attack of gastro-enteritis. The squint had disappeared after a few weeks, but the parents had noted that the boy's vision was becoming impaired. Dr. Lockhart Gibson found that the atrophy was almost complete in the left eye. The patient was able to count fingers with difficulty, when using the left eye only. In the right eye the condition was not as advanced, and the vision in this eye was  $\frac{7}{10}$ . There was no prospect of much improvement in vision, but the sight could have been saved by correct treatment, had the practitioner recognized the disease when the squint developed.

Sir David Hardie exhibited the temperature chart and a blood film which had been prepared in connexion with the case of a child, aged one year and eight months. The child had had fever at Port Darwin while on a journey from Slam to Brisbane. The temperature chart was not characteristic of malaria, but as the child came from a malarial district, and no other signs were discovered to explain the sudden rises in temperature, the blood was examined. Dr. Sidney Page had found the malarial organism in the blood. The child had been given quinine bisulphate, 0.06

gm., every four hours. He was doing well, and there was no recurrence of the fever.

Dr. T. H. R. Mathewson showed a skiagram of the abdomen of a girl, aged four years, from whom he had removed a hairpin from the ascending colon. The child had informed her parents about nine months previously that she had swallowed the hairpin, but as she seemed to be in good health, nothing was done to recover it. The child had been brought to the Hospital in July on account of anorexia and loss of weight. She complained of pain in the right lumbar region, and walked with a limp, holding the right hip flexed. On examining the abdomen, Dr. Mathewson felt a resistance in the right lumbar region. A skiagram revealed the hairpin in position of the ascending colon. Had the hairpin passed the ileo-caecal gland, it would probably not have been held up, unless it had become embedded in some structure. He assumed that part of the pin had become embedded in the psoas muscle. This would account for the pain in attempting to extend the right hip. At the operation the hairpin was found in the ascending colon, the bent end reaching almost to the hepatic flexure. It was easily extracted in two pieces through an opening in the bowel enclosed in a purse-string suture. The child had made an uninterrupted recovery.

Captain H. Hunter Griffith, Medical Officer in Charge of the Lytton Camp for Venereal Diseases, read a paper entitled "The Clinical Treatment of Syphilis in the Australian Army."

Dr. F. W. Taylor thanked Captain Griffith for his excellent paper, and suggested to the members that the discussion be postponed until after the paper had been published in *The Medical Journal of Australia*. The suggestion was adopted.

Dr. J. Lockhart Gibson read a paper entitled "The Diagnosis, Prophylaxis and Treatment of Plumbic Ocular Neuritis."

Dr. F. W. Taylor made the same suggestion in regard to the discussion on this paper.

#### MEDICO-POLITICAL

A meeting of the Queensland Branch was held on August 3, 1917, at the B.M.A. Rooms, Adelaide Street, Brisbane, Dr. W. F. Taylor, the Vice-President, in the chair.

Dr. E. Russell asked if the wives and dependants of officers would come under the same category as the wives and dependants of other members of the Australian Imperial Force in regard to the resolution of the Branch concerning gratuitous treatment.

Dr. W. F. Taylor stated that during the South African War it had been customary not to charge the dependants of officers.

Dr. J. Lockhart Gibson said that, as officers were soldiers, he did not think that there was any necessity to alter the resolution.

Dr. G. H. Hopkins said that the Branch had no right to dictate to its members whom they should attend for nothing and whom they should charge.

Dr. F. W. Taylor said that if any change in the resolution was desired, notice of motion would have to be given.

Dr. Taylor read a letter from the Pharmaceutical Society in reference to the prescriptions of certain doctors, which had been written in cipher.

It was resolved that the consideration of this matter should be deferred to the next meeting.

The Honorary Secretary was instructed to send a letter to Dr. and Mrs. Doyle, sympathizing with them on the death of their son, Lieutenant Doyle.

The following have been elected members of the New South Wales Branch:—

Leo Bamber, M.B., 1917 (Univ. Sydney), Sydney Hospital.

Robert Martin, M.B., 1917 (Univ. Sydney), Women's Hospital, Crown Street, Sydney.

William Brendon Curganven, M.R.C.S., Eng., 1890, L.R.C.P., Lond., 1890, of 23 Elizabeth Street, Paddington, has been nominated for election as a member of the New South Wales Branch.

# THE MEDICAL PROFESSION AND THE FRIENDLY SOCIETIES IN VICTORIA.

The following is an official statement concerning the negotiations between the Association of the Friendly Societies and the Victorian Branch of the British Medical Association:—

The dispute between the lodge medical officers in Victoria and the Association of Friendly Societies has now culminated. The representatives of the Friendly Societies offered to make certain concessions as their final answer to the demands of the profession. These offers of compromise fall so far short of what might reasonably have been expected that the Council of the Victorian Branch of the British Medical Association has intimated to the Association of Friendly Societies that it finds it impossible to accept them.

It will be remembered that prior to 1913 there was but little organization of the medical profession in Victoria, and the individual lodges made their own terms with their respective medical officers. It was only natural that the lodge secretaries should do their best for their members, by setting off one doctor against another. The result was that as little as 12s. 6d. per annum was paid to the lodge medical officer, with an average of 14s. per member.

In 1913 the profession was organized thoroughly, and 90% of the reputable medical practitioners of Victoria were enrolled as members of the British Medical Association. A conference was held on the 13th of December of that year, at which the claims of the Victorian Branch were laid before the representatives of the Association of Friendly Societies in the document known as the "Common Form of Agreement." The representatives of the Association of Friendly Societies promised to consider the matter very carefully and earnestly, and the hope was expressed that a round table conference would meet shortly, and settle the points in dispute.

The two chief clauses of the Common Form of Agreement were Section 8, dealing with the payment to the lodge medical officers, and that now known as the "Income Limit." In the former section it is stipulated that the trustees of each lodge shall agree to pay to the medical officer quarterly a salary in respect of each member on his list during the whole or portion of a quarter at the rate of one pound per annum in the metropolis and in the cities of Ballarat, Bendigo and Geelong; and in the country and other towns at the rate of 26s. per annum, medicine and mileage to be charged extra. The "Income Limit" clause is not to apply to present members of lodges, but to all future members; and it provides that only those whose incomes do not exceed £208 per annum when joining a lodge shall receive medical benefits, and that even these shall continue to receive such benefits until their income reaches £312 per annum, when they shall cease to be so entitled. Provision is also made for continuing the medical service to members receiving more than that limit who have many dependents, and through force of circumstances are unable to provide medical attendance otherwise than through the medical benefits of the lodge.

This demand for an increase in payment and the correction of grave abuses of lodge medical service was considered by the annual conferences of the various orders, and on July 25, 1914, nineteen delegates from each side met together, when the case from the Friendly Societies' point of view was put. At the suggestion of one of their delegates, a smaller committee of five from each side was appointed to meet in a fortnight's time, "to get to close grips," and to report to a subsequent meeting on August 22, 1914.

The sub-committee of five met on August 8, as arranged; but, as in the meantime war had been declared on Germany, one delegate, on behalf of the Victorian Branch of the British Medical Association, moved the following resolution:—

That in this national emergency a recommendation be sent to the Council of the British Medical Association and of the Association of Friendly Societies in Victoria to postpone consideration of the matters now under consideration to some future date.

It was felt that bad times were immediately in store, more particularly for the working classes. The Victorian Branch was thanked for its kindly thought, and Mr. Liston, on behalf of the Friendly Societies, seconded the motion, which was carried unanimously. It was agreed that nothing should be done on either side in the meanwhile to affect the *status quo*; and the two Secretaries were authorized to confer at some future date, and call that sub-committee together to resume negotiations.

For three years the members of the Victorian Branch of the British Medical Association, though becoming restive, remained inactive; but, as it was seen that the financial depression anticipated had not been realized, that indeed matters financially were much the other way, while the expenses of medical men had risen considerably, the Council of the Victorian Branch was urged to re-open negotiations. A proposal to take a referendum on the subject, however, was defeated. At last the necessity of action was borne in upon the Council, and, as a result, the Secretaries of both sides conferred early this year, with a view to a resumption of the suspended conference. The Association of Friendly Societies replied that the same national emergency existed as at the outbreak of the war, and that no good object could proceed from a conference. The Council thereupon requested a re-consideration of the question of re-opening the conference, and intimated that it would take a refusal to re-open negotiations in the light of an unfriendly act. The Friendly Societies, then, acceded to the request of the Victorian Branch.

While these negotiations were proceeding, a conference of delegates from each subdivision of the British Medical Association throughout Victoria with members of the Organization Committee was held on May 30, 1917, to consider the situation. The Common Form of Agreement was taken clause by clause, modifications and concessions suggested, and the future policy discussed. Professor Berry, who presided, pointed out that the whole machinery and organization were ready, if necessary, to be put into operation as soon as the result of the conference was determined. He also referred briefly to various necessary procedures in future policy.

On June 2, 1917, the five delegates from either side met, and the case from the Friendly Societies was put; that they were working under an Act of Parliament, and that the financial limits of payment allowed by that Act had been reached; and that lodge members, despite the increase in wages, were in a worse financial position than before the war.

The conference met once more on July 14, 1917, and, at that meeting, the delegates were informed that the two essential clauses in the Common Form of Agreement were the minimum requirement. Copies of that Agreement were supplied, and some discussion ensued. A further meeting was arranged for July 21, 1917.

At this further meeting the clauses of the Agreement were discussed *seriatim*, and some progress was made, but, owing to the lateness of the hour, the clauses relating to salary and income limit were deferred to a later date.

On August 4, 1917, the discussion of these two clauses was entered upon. The most that the Friendly Societies would offer was 17s. for the town medical officer and 24s. for the country medical officer, 14s. for women's lodges, the new agreement to come into force in June, 1918. The delegates of the Association of Friendly Societies refused even to consider any income limit.

On August 8, 1917, a special meeting of the Council was held to receive the report of the delegates, and the Secretary, by its unanimous decision, was directed to intimate to the Association of Friendly Societies in Victoria that the Council regretted that it was unable to accept the compromise offered.

This, then, is the present position of affairs, and the Council of the Victorian Branch now relies with confidence upon the active and whole-hearted support of the members of the profession in the further steps which it may be necessary to take.

(Signed) C. STANTON CROUCH,  
Secretary.

Victorian Branch, British Medical Association.



## Public Health.

## NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ended August 11, 1917:—

	Metropolitan District.		Hunter River District.		Rest of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs. Dths.
Enteric Fever	3	0	0	0	0	0	3 0
Scarlatina	19	0	4	0	20	0	43 0
Diphtheria	30	1	8	0	27	1	65 2
C'bro-Sp'l Menin.	5	2	1	0	0	0	6 2
*Pul. Tuberculosis	19	15	2	0	1	1	22 16
Malaria	1	0	0	0	0	0	1 0

\* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoombs Municipality.

Seventeen cases of variola have been reported from Warren.

## VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the fortnight ending August 19, 1917:—

	Metropolitan.		Rest of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs. Dths.
Diphtheria	95	5	58	3	153 8
Scarlatina	56	0	39	0	95 0
Enteric Fever	3	0	5	0	8 0
Pulmonary Tuberculosis	47	19	13	7	60 26
C'bro-Spinal Meningitis	4	—	3	—	7 —

## QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the fortnight ending August 18, 1917:—

Disease.	No. of Cases.
Diphtheria	44
Pulmonary Tuberculosis	13
Scarlatina	12
Erysipelas	5
Enteric Fever	5
Cerebro-Spinal Meningitis	1
Malaria	2

## SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, for the week ending August 4, 1917:—

	Adelaide.		Rest of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs. Dths.
Pertussis	0	0	29	0	29 0
Diphtheria	2	1	21	0	24 1
Scarlatina	3	0	11	0	14 0
Pulmonary Tuberculosis	2	2	10	4	12 6
Erysipelas	2	0	4	0	6 0
Favus	0	0	4	0	4 0
Enteric Fever	0	0	3	0	3 0
Morbili	0	0	3	0	3 0

## WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending August 4, 1917:—

	Metropolitan.		Rest of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs. Dths.
Enteric Fever	1	—	1	—	2 —
Diphtheria	11	—	2	—	13 —
Scarlatina	7	—	0	—	7 —
Pulmonary Tuberculosis	1	—	2	—	3 —
Erysipelas	1	—	0	—	1 —
Septicæmia	1	—	1	—	2 —

## INFECTIVE DISEASES.

The Bulletin No. 16 of the Quarantine Service, which was issued on August 3, 1917, contains the following information:

## Variola.

During the period between July 12 and July 28, 1917, seven cases of small-pox were notified in New South Wales. In the Dutch East Indies there were 93 additional cases and four deaths.

## Plague.

The number of cases of plague registered in India between May 20 and June 9, 1917, was 10,752. During the same period there were 8,580 deaths from this disease. In Egypt there were 50 cases and 29 deaths in the fortnight ending May 24. There were two cases reported in Ceylon between May 27 and June 16, 1917. Since the publication of the last Bulletin, two fatal cases have been reported in Java.

## Cholera.

In the Dutch East Indies ten further cases of cholera, with seven deaths, have been reported. There was one case of cholera in the Straits Settlements during the four weeks ending July 2, 1917.

## Typhus Fever.

The distribution of typhus fever during the week ending June 22, 1917, is reported by the United States Public Health Service as follows:—

Place.	Cases.	Deaths.
Mexico	290	—
Java	28	—
Russia	23	1
Trinidad	4	3
Algeria	4	2
China	1	—
Greece	—	10

## Anthrax.

The importation from eastern and south-eastern Asia, India, Ceylon, Japan, the East Indian Islands and the Philippine Islands, of shaving brushes or other articles made from the hair of animals has been prohibited, unless the articles are accompanied by a certificate from a responsible official of the Health Department of the country of origin to the effect that the articles were made from hair which had been effectively cleansed and disinfected before manufacture.

## Naval and Military.

The 332nd and 333rd lists of casualties sustained by Australian troops were issued on August 22 and 27 respectively. These lists contain the names of 1,769 officers, nurses and men. There is no medical officer named in either list. The total number of dead in the two lists is 501, and of wounded 712. In addition, there are 52 reported missing, 51 prisoners of war, 35 injured, and 567 ill. In two cases the nature of the casualty is not known.

According to advices from London, the Distinguished Service Order has been awarded to Lieutenant-Colonel J. S. Purdy, who for seven days was under continual shell fire and personally supervised the evacuation of the wounded.

The same order has been awarded to Major R. S. Furber for great devotion to the wounded in an advanced dressing station during five days of heavy shell fire. On several occasions he personally helped to bring in the wounded.

The following officers have been awarded the Military Cross:—

Captain J. R. Beard  
 Captain L. B. Elwell  
 Captain R. L. Kenihan  
 Captain H. Powell  
 Captain F. P. Solling  
 Captain C. W. Whiting  
 Captain J. S. Yule  
 Captain R. C. Winn



The Minister for Defence has published in the *Commonwealth of Australia Gazette*, No. 133, of August 21, 1917, certain extracts from *London Gazettes* dealing with distinctions gained by members of the Australian Imperial Force. The following are the entries relating to members of the Army Medical Corps:—

His Majesty the King has been graciously pleased to confer the Military Cross on the undermentioned officers in recognition of their gallantry and devotion to duty in the field:—

Captain Norman Craig Shierlaw, A.M.C., R.M.O., Infantry (since deceased).

For conspicuous gallantry and devotion to duty. He continually attended to the wounded for two days and nights under heavy fire. He has on many previous occasions done fine work.

Captain Gladston Montague Hunt, A.M.C.

For conspicuous gallantry and devotion to duty. He showed an absolute disregard of danger, and set a splendid example to his stretcher-bearers, working with them over ground continually swept by heavy fire. He worked for six consecutive weeks in a forward area in charge of an advanced dressing station.

Captain Harrie Bertie Lee, A.M.C.

For conspicuous gallantry and devotion to duty in evacuating the wounded. He set a splendid example throughout, and worked continually under very heavy fire. He has previously done fine work.

Captain John Hardie, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He attended a large number of wounded at the aid post under heavy fire, and continued at work after being wounded himself in two places. He set a fine example throughout.

#### AUSTRALIAN ARMY MEDICAL CORPS COMFORTS FUND.

Since we went to press last week, five additional subscriptions to the Australian Army Medical Corps Comforts Fund have come in. The total is gradually increasing. We still need £460 7s. to reach the £500 asked for.

	£	s.	d.
Amount previously acknowledged	34	8	0
Dr. R. A. R. Wallace (Coburg, Victoria)	1	1	0
Dr. A. I. Blue (Redfern, N.S.W.)	1	1	0
Dr. H. H. Schlink (Sydney)	1	1	0
Dr. H. F. Alsop (Windsor, N.S.W.)	1	1	0
Dr. Kerr Smith (Brisbane)	1	1	0

### Correspondence.

#### THE TREATMENT OF FRACTURES.<sup>1</sup>

Sir,—It took me a night's rest to recover from the shock received from Dr. Hamilton Russell in his address on Friday night. Therefore do I offer the following sentences upon his remarks:—

In regard to muscular action in relation to a fractured bone. Every muscle has its place and power in the human body, as a result of the biological potentialities which are impressed upon it when the ovum is impregnated, and it becomes what is presented to medical observation concomitant to feeding and training and the escape from the innumerable enemies which lurk in its developing path. Its physiological activities are a response to the quality of the "River of Life" which bathes its every fibre, and the nervous impulses which reach it from the central system. Its physical capacities are those which pertain to any other combination of organic and inorganic matter with the same percentages. Never forgetting the immeasurable gap between material endowed with *Bios*, and that not so controlled.

If I understood correctly, the lecturer gave to the muscles having relation to the femur a rôle separate from that of other muscles. Can that be correct but in one particular,

<sup>1</sup> The publication of these letters has been delayed in order that they might not anticipate the publication of Mr. Hamilton Russell's address.

*viz.*, that they are the longest in the human body? In other respects they are but as muscular tissue generally. They play a part in regard to fractures in response to sensory stimulus, the relations of their attachments to the break, and the physical state of the bone when the causing force has ceased to act. Normal voluntary muscles have no action beyond that compassed by tonicity, unless under the direction of messages formulated by the will and despatched along the nerve strands. In the case of fracture, all these are directed towards relief from pain and the obtaining of comfort. Such being the case, it is unlikely that there is any muscular tendency, *per se*, towards restoring to a normal position the disassociated bony surfaces.

The flexor and extensor sets of muscles bear functionally the same relation to the bones in every part of the body, and they are, in the healthy individual, as well proportioned in the leg, arm and elsewhere as in the thigh, the moment such due opposition in action ceases distortions commence.

Oh, no! the wisdom of the leaders of thought in the medical profession is not set at naught by the *ipse dixit* of any one individual.

What a tremendous load would be lifted from the mind of the medical man practising in industrial communities if the white pillow and the strands of bandage were all-sufficient in fractured bones?

If effective in only the leg bones, the sum total of sleep gained annually by the profession in one country would be enormous.

Take a Pott's fracture. Associated with the break in the bone there is always tearing of soft tissues and increase in the transverse diameter of the ankle joint. In any but the mildest cases there is some degree of luxation, inversion of the foot and a line prolonging the external malleolus downwards forms an acute angle with the outer aspect of the astragalus.

Six months after the accident visions of a case in the law courts arise before the medical practitioner in charge; the spectre becomes larger when the patient is unable to resume work after twelve months, and if he follows his occupation when twenty-four months have gone by without further trouble than professional worry, the vision gradually fades until it is but as a memory on the tablets of the brain.

If peradventure a judge and jury have to express an opinion, I fear me that the picture of a white pillow with encircling pieces of bandage would avail but little for the surgeon's protection before the cross-examination of an able lawyer, and they would carry scant weight against the opinions written in the various text-books coming from Europe and the United States of America.

Yours, etc.,

JOHN B. NASH.

July 28, 1917.

Sir,—There is one point in connexion with Mr. Hamilton Russell's address that would strike anybody who has had to deal much with fractures, *i.e.*, that his theories have not resulted in simplifying methods of treatment. I refer more particularly to fracture of the mid-shaft of the femur. The treatment has evolved into the necessity of a four-post bed and a mathematical acquaintance with the parallelogram of forces.

As his theories are revolutionary, I may be excused in suggesting a still more revolutionary practice for this form of fracture, the one chosen by him to exemplify treatment.

My advocacy of the method has been suggested by the uniformly good results obtained in obstetric fracture of the thigh in the newly-born by full flexion on the abdomen, and in older babies and young children by the success following Bryant's suspension method. To apply this to adults and combine with it extension, the weight and pulley would have to work over the foot of the bed. Is it not worth a trial as a rational method of ensuring two essentials: (1) muscular relaxation, and (2) fragment co-adaptation? After this, with good measurements and callus formation, the Thomas knee splint and all Colonel Robt. Jones's methods, to my mind, cannot be improved on. In a recent paper of mine, published by you, I mentioned this treatment being advocated by Sir A. McCormick, when I was his house surgeon 25 years ago.

I have read Mr. Russell's paper and listened to his address, and gathered from him that muscular relaxation and fragment co-aptation are not essential to good functional results, so the import of what I wrote on fractured femur will not find favour in his mind. Still, it is a plan I would be inclined to adopt and teach students, and if the results in any way approach those I have seen in children, I would be more than satisfied. I see an analogy between such a method and that of full elbow flexion for a fractured humerus. I might further add that, in my opinion, all conservative and postural methods should be tried in fracture of the femur before an open plating operation is tried.

I regret that I was unable to take part in the discussion following Mr. Russell's paper, and at the same time apologise for trespassing on your valuable space.

Yours, etc.,

E. H. BINNEY.

Macquarie Street, Sydney,  
July 30, 1917.

## Proceedings of the Australasian Medical Boards.

### QUEENSLAND.

The following have been registered under the provisions of the "Medical Act of 1867" as duly qualified medical practitioners:—

Howson, Frank, Brisbane, M.R.C.S., Eng., L.R.C.P., Lond., 1910.

Noble, Hubert Arthur Edgar, Inglewood, L.R.C.P. and L.R.C.S., Edin., L.F.P.S., Glasg., 1892.

## Medical Appointments.

Dr. Frank Reginald Featherstone has been appointed Officer of Health to the Borough of Rutherglen, Victoria, during the absence on active service of Dr. John Richards Harris.

Dr. Maurice Matenson has been appointed Officer of Health to the Shire of Towong (Corryong and Walwa Portions), Victoria, during the absence on active service of Dr. David Peter Greenham.

Dr. John Hardie Macarthur has been appointed Medical Superintendent, Dunwich Benevolent Asylum, and Superintendent, Inebriate Institution, Dunwich, Queensland, in place of Dr. Linford Elfe Row, who has resigned.

## Medical Appointments.

### IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
<b>TASMANIA.</b> (Hon. Sec., Belgrave, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
<b>VICTORIA.</b> (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.

Branch.	APPOINTMENTS.
<b>QUEENSLAND.</b> (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute. Warwick Hospital.
<b>SOUTH AUSTRALIA.</b> (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
<b>WESTERN AUSTRALIA.</b> (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
<b>NEW SOUTH WALES.</b> (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmalm United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Penrith, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
<b>NEW ZEALAND: WELLINGTON DIVISION.</b> (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

## Diary for the Month.

- Sept. 5.—Vic. Branch, B.M.A., Branch.  
Sept. 5.—Central Southern Med. Assoc. (N.S.W.).  
Sept. 7.—Q. Branch, B.M.A., Branch.  
Sept. 11.—Tas. Branch, B.M.A., Council and Branch.  
Sept. 11.—N.S.W. Branch, B.M.A., Ethics Committee.  
Sept. 13.—Vic. Branch, B.M.A., Council.  
Sept. 13.—N.S.W. Branch, B.M.A., last day for nomination of two Candidates for election of Federal Committee.  
Sept. 14.—N.S.W. Branch, B.M.A., Clinical.  
Sept. 14.—S. Aust. Branch, B.M.A., Council.  
Sept. 18.—N.S.W. Branch, B.M.A., Executive and Finance Committee.  
Sept. 19.—W. Aust. Branch, B.M.A., Branch.  
Sept. 19.—South Sydney Med. Assoc. (N.S.W.).  
Sept. 21.—Q. Branch, B.M.A., Council.  
Sept. 25.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.  
Sept. 26.—Vic. Branch, B.M.A., Council.  
Sept. 27.—S. Aust. Branch, B.M.A. Branch.

## EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.  
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.  
All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.